

SWIMMABLE BIRRARUNG ENABLING INVESTMENT TO FLOW IN SERVICE OF A REGENERATIVE FUTURE

April 2024



REGEN
MELBOURNE



SWIMMABLE BIRRARUNG

ENABLING INVESTMENT TO FLOW IN SERVICE OF A REGENERATIVE FUTURE

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About Regen Melbourne

Regen Melbourne is an engine for collaboration, in service to the regeneration of our city. Founded in the wake of the Black Summer fires and in the midst of COVID-19 lockdowns, our co-created social infrastructure is designed to raise our collective ambitions and deepen our systemic impact.

Regen Melbourne acknowledges the traditional custodians of Greater Melbourne, the Wurundjeri Woi Wurrung, Bunurong and Boon Wurrung people of the Kulin Nation. We pay our deep respect to Elders, past and present, and we acknowledge their living connections to land and waterways, including Birrarung Yarra River and Nairn Port Phillip Bay.

EXECUTIVE SUMMARY

In the future the Birrarung Yarra River will be celebrated as being at the core of the city's identity. A healthy river will make a long-term contribution to our prosperity and amenity. Ongoing care for the river will be intuitive for Melbourne's communities. Our lives will be imbued with the vibrancy of the river and its catchments.

This is the vision of a swimmable Birrarung.

The Systems Capital research undertaken over nine months in 2023 has affirmed two truths concerning this vision. Firstly, there is widespread support for this future from all sectors – government, communities and businesses in Melbourne. Secondly, investment is not flowing to serve this vision. The future of our river and its critical role in the liveability of Melbourne faces a dilemma. On one hand the vision is critical for the future prosperity and liveability of the city and there is money available to achieve the vision. On the other hand, there are major limitations in the investment tools and mindsets that would enable this money to flow in service of a thriving Birrarung.

There is a **mismatch between:**

- a) **acknowledging the urgent need to deploy finance in service of transformation and**
- b) **the amount and quality of money flowing towards genuinely systemic on-ground action.**

Melbourne is not alone in wanting to address this dilemma of how to channel investment in service of regeneration and life. In the 2023 World Economic Forum Annual Meeting in Davos, the world's most prominent business and political leaders ranked environmental damage, climate change, natural resource and biodiversity loss as six of the top ten major threats to the global economy. The problem is that the current investment models require neat, linear relationships between costs and benefit (value) – these so-called business cases. These models are inappropriate for investing in natural and social system transformation such as river systems, where the relationship among investment and values are many and complex.

The following research confirms what many in the emerging systemic investment community are finding – there is a need for new investment paradigms that enables transformations in systems such as the Birrarung:

- That understands natural systems as having rights as entities.
- In which natural systems enable connections for groups and individuals.
- Where environmental resources work as natural systems able to adapt and evolve.

- Where knowledge of natural system behaviour is integrated into the life of communities.
- And hence, sustainability of the river system is intuitive for communities, rather than depending on regulation and enforcement.

This report synthesises the latest scholarship on systems investing and weaves in place-based knowledge and feedback from stakeholders across the Melbourne ecosystem to explore a framework for a different type of investment logics which securing value and returns.

The report delves into four key elements:

- 1) **An articulation of a vision for a swimmable Birrarung** by describing not only the structural and environmental shifts required, but also how our relationship to the river changes in this vision. This work is in conversation with indigenous perspectives for integrating social, environmental and cultural values.
- 2) **A deep dive into how change happens** by imagining the possibilities for the future taking an abundance approach and articulating the counterforces that seek to preserve the status quo with a scarcity mindset.
- 3) Exploring the **role of partnership and collaborations** as a particular focus area to unlock new value
- 4) Recognising that a constraining features of change in the Melbourne context is the **quality of capital, not the quantity** of available capital.

As a result of this initial research, a formal collaboration has emerged called Melbourne Invests for Systemic Transformation (MIST for short). This is a collaboration dedicated to nurturing a paradigm shift in purpose-led capital and actively prototyping investment vehicles at the intersection of systems thinking and finance. Convened by Regen Melbourne, MIST includes local capital holders and fund managers, alongside national thought leaders including Small Giants, Climate-KIC Australia and Centre for Systems Innovation, and international systems partners like Dark Matter Labs and TransCap Initiative.

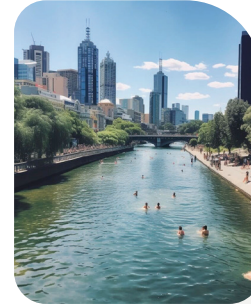
This an open invitation to the investment community to explore how to shift the quality of capital towards an alignment with the necessary systemic change for this moment.

CHAPTER I PROJECT OVERVIEW

A swimmable Birrarung as one case in a global need for urgent action

The Swimmable Birrarung initiative seeks to transform the way the river (also known as the Yarra) fits within the life of Melbourne. Rivers and their catchments are complex systems within which:

- Each element interacts with many other elements.
- The change in any one element impacts these other elements in unpredictable ways and often with unintended consequences.
- The elements combine to work as a whole.



Find out more about the Swimmable Birrarung project at regen.melbourne/swimmable-birrarung

The Birrarung is not just an environmental system — it sits within an urban environment, interfacing with social, cultural, economic and political activities. Aligning these activities to achieve the vision of a swimmable Birrarung is a major challenge. The starkness of this challenge is made apparent when, while significant financial resources are available from public, private and community sources, these are not flowing towards restoring the river to a swimmable water quality.

This seemingly intransigent barrier between financial investment and sustainable outcomes is now drawing the attention of many political, economic and scientific leaders who understand that urgent change is required to safeguard our planet for the wellbeing of human civilisation. The UN Sustainable Development Goals, Planetary Boundaries framework and the COP process point to global agreement for change at a high level. However, progress towards meaningful change in practice is limited, with emissions rising, natural disasters increasing and inequality accelerating. Social and economic transformation that rises to the scale of our current challenges is more urgent than ever before.

In response to these challenges, a movement of place-based action has developed in towns and cities around the world. Inspired by the Doughnut Economics framework, developed by Kate Raworth, local actors are coming together to collaborate and define the safe and just future they want to see.

In Greater Melbourne this has led to the development of Regen Melbourne, an engine for collaboration, powered by an alliance of more than 180 organisations acting in service to the place. Regen Melbourne hosts a portfolio of wildly ambitious projects, including making the Birrarung Yarra River swimmable again. These wildly ambitious projects are collectively designed to transform the city into a robust, resilient and thriving place; creating a beacon regenerative city. The work is guided by the [City Portrait](#), which systematically measures progress as a city based on a localised Melbourne Doughnut.

Systems change requires a focus not only on wildly ambitious goals, but also an understanding of the conditions that maintain our status quo. As Melbourne-based systems expert Dr Luke Craven describes,

“the transformational imagination of systems work remains trapped inside an environment that, ultimately, does not want to see it succeed.”

The conditions that hold our current, extractive economic system in place include the stories that we tell, how we organise and value research, the health of our democratic system, the levels of trust in our community and how money does and doesn't move in service to a safe and just future.

This report focuses on the role of capital as a fundamental lever in the pursuit of long-lasting and systemic change in Greater Melbourne. For the vision of a safe and just space to be realised, money must flow in service of life.

PROJECT METHODS

Recognising the scale of the ambition to make the Birrarung swimmable again, and the opportunity that it presents, a cluster of aligned actors formed around the challenge of finance and capital in service to the river. The TransCap Initiative, a leading global think-and-do tank working at the interface between systems thinking and investment, funded this initial nine-month research project to explore how money flows in service of a swimmable Birrarung and how pathways might be created to activate capital.

During this research, partnerships were formed with Dark Matter Labs to co-design an investment fund for a swimmable Birrarung and Small Giants to convene gatherings of capital holders and explore new pathways for investment. Collaborations followed with Coalition of Everyone, Climate-KIC Australia and the Griffith Centre for Systems Innovation to grapple with systemic finance questions and design activations like bioregional funds that reflect systemic investing practice. These organisations were primed to test what moving to action looks like.

As these partnerships were forming, we spoke widely to people responsible for deploying capital in Melbourne through an iterative, action-learning process that included conducting interviews, hosting roundtables and connecting with global systemic capital leaders to prototype novel investment vehicles. Actors involved in the research include people working in government, universities, philanthropy, impact investing and institutional finance.

The questions asked through this process were:

- How were they investing towards the regeneration of the river?
- What insights do they have from practice to the barriers in the Victorian and Australian investment landscape to drive systems change?
- Were they ready to invest towards a swimmable Birrarung?

The process behind this report has been:

- 1] Analyse the latest global knowledge on the challenges of attracting investment to systems challenges.
- 2] Apply this analysis to the Swimmable Birrarung context to propose a framework – a theory of change.
- 3] Consult with stakeholders to identify opportunities for aligning our theory of change with investment opportunities.

The order is important. We firstly wanted to understand what the emerging theory of systems change looks like in practice. Secondly, we sought to apply this understanding of systems change to the specific requirements of the swimmable Birrarung context. Finally, we tested how the Melbourne investment ecosystems are ready (or not) to finance these systems change. Systems innovation recognises that a precursor to jumping to solutions is to ground the analysis in how change happens. The framing of the project recognises that funding a swimmable Birrarung is both a quality and quantity question. In this [systems capital blog](#) we outline more details about the streams of work undertaken as part of this research.

This report shares insights from this process.



CHAPTER 2 INTRODUCING THE SWIMMABLE BIRRARUNG PROJECT

A wildly ambitious goal: a swimmable Birrarung

The swimmable Birrarung initiative is a transformative and city-shaping project with a vision to regenerate the river to the extent that it is healthy, thriving and swimmable again from source to sea. To achieve this, a coherent and systemic response from actors all across the city is needed.

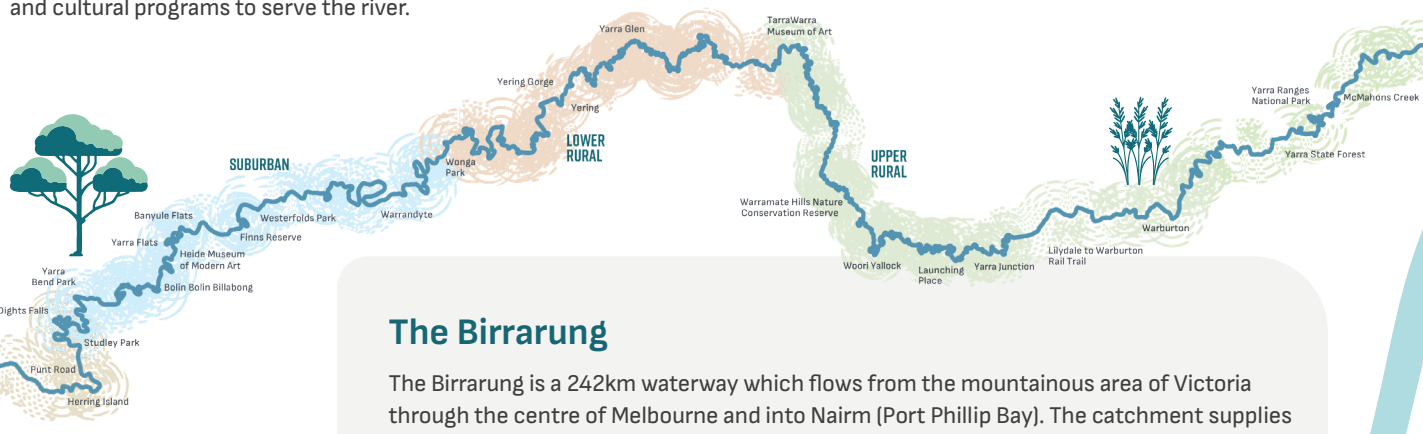
The concept of a swimmable Birrarung is in many ways a 'trojan horse' for addressing a range of ecological and social objectives. In the context of the climate and biodiversity emergency, a regenerated Birrarung is a powerful mitigator of down-side risks like biodiversity loss, flooding risk, water supply management, urban heat, economic loss (tourism downturns) and land value loss. Of course, a regenerated Birrarung will also provide endless systemic upsides like urban cooling, biodiversity gains, enhanced public physician and mental health, increased tourism and economic activity, water security, and cultural (re)connection and healing.

A healthy river through the heart of Melbourne is ambitious but not naive, nor is it a new idea. First Nations care, advocacy and custodianship of the Birrarung (led by the Wurundjeri Woi Wurrung people) have been guiding forces in the river gaining legal status in 2017, treating the river as one living entity. The Yarra Riverkeeper Association runs a suite of environmental and cultural programs to serve the river.

Melbourne Water, along with other utilities and the local government entities are guided by the Yarra Strategic Plan, which positions the river as a living and integrated natural resource. The vision for the Swimmable Birrarung project also captures the hearts and minds of citizens, including sporting and cultural institutions across Melbourne who want to see the river's health improve.

Since 2021 Regen Melbourne has been convening organisations from across sectors to identify the opportunity and challenges for a swimmable Birrarung. This is a classic "wicked problem" — many stakeholders, many interfaces among communities, governments and businesses, and many beliefs about what the river represents and how it should be valued.

Making the river swimmable will only be possible through significant changes to the current landscape of policy and governance, changes to how river health is measured, understood, and managed and widespread shifts in storytelling and our relationship to country and waterways. And of course, challenging the paradigm of economic extraction which has (literally) shaped the river over the last 200 years.



The Birrarung

The Birrarung is a 242km waterway which flows from the mountainous area of Victoria through the centre of Melbourne and into Naarm (Port Phillip Bay). The catchment supplies 70% of Melbourne's drinking water and supports one third of Victoria's flora and fauna as a critical ecosystem corridor. The Birrarung has deep cultural significance for First Nations people as a lifeblood for country, as a source of nourishment and as a meeting place.

The Birrarung also supports billions of dollars of economic value in tourism, sports, arts, business and culture and through its role as a key feature in port and precinct development.

Birrarung is first nations name for the waterway, meaning river of mist and shadows. Post-colonisation the river was called The Yarra River; this report refers to it as Birrarung throughout.

CHAPTER 3

FINANCE AS A LEVER FOR CHANGE IN COMPLEX SYSTEMS

The challenge: money is not flowing in service of life

The United Nations identifies finance as a critical success factor for the fulfilment of the Sustainable Development Goals. Similarly, the Paris Agreement names finance as one of three essential strategies for reaching our climate goals. It is agreed that capital is a critical lever in driving positive change and addressing our global challenges.

It is also clear that the status quo carries significant risk to our global economy. At the 2023 World Economic Forum Annual Meeting in Davos, the world's most prominent business and political leaders found that environmental damage, climate change, natural resource and biodiversity loss made up six of the top ten major threats to the global economy. The consistent and uncontroversial message from the highest leadership of the financial sector is that the cost of inaction on environmental issues will be larger if it is delayed.

In response to this context there have been countless "sustainable finance" and impact investing initiatives in Australia and around the world. In fact, most people reading this report will have been part of these initiatives. It is clear that our challenge is not a desire for change.

Instead, the problem is there is a **mismatch between:**

- a) **acknowledging the urgent need to deploy finance in service of transformation and**
- b) **the amount and quality of money flowing towards genuinely systemic on-ground action.**

The result is a growing risk to the Australian and global economy which, if unaddressed, will have major economic and environmental consequences, entrench inequality and stagnate prosperity.

Wide-sweeping systems change is essential to address challenges such as climate change and urban amenity. However, our financial and investment systems (even those with a sustainable or impact focus) are geared to simple linear relationships between investments and outcomes, costs and benefits. Hence capital deployment is often limited to treating symptoms rather than solving for deep-rooted causes.

As TransCap notes, "the paradigms, structures, and practices of today's financial sector prevent it from unleashing deep, structural change in the real economy."

As such, the focus on simply increasing the quantity of capital into the "impact space" is only one half of the challenge. The other half is interrogating the quality of capital and shifting the finance paradigm and investment logic away from incrementalism and single-point solutions and towards systemic transformation.

"Mobilising greater quantities of climate finance is only one aspect of the challenge. We also need to figure out how to deploy climate finance if the purpose is to transform place-based systems."

— TransCap Initiative

Despite consensus around the climate emergency and the perils of increasing inequality, our current financial paradigm is blind to the quality and magnitude of systemic risks we face and equally blind to the transformational opportunity that lies in structuring system-level value. The gap between ambition and action requires a deeper recognition and articulation of the problem as well as tactical responses which drive system-level change. It forces us to ask new questions about how capital flows.

"Current approaches by investors tackling social and environmental challenges tend to significantly underestimate what is required to move past the multiple crises facing humanity and shift the inertia of the status quo."

— Jess Daggers, Alex Hannant & Jason Jay Dec. 12, 2023, Systemic Investing for Social Change

We need new approaches.



SYSTEMIC INVESTING

A growing group of researchers and practitioners around the world is exploring what an investment logic looks like that serves the primary purpose of systems change. Organisations pursuing this work include:

TransCap Initiative  Small Giants 

Dark Matter Labs 

TWIST  FEST 

Griffith Centre for Systems Innovation 

Deep Transition Lab 

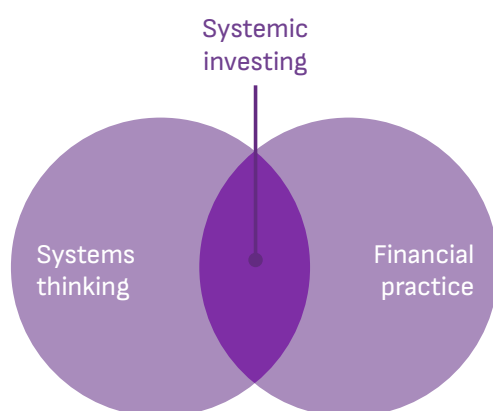
The Investment Integration Project 

and many more.

This emerging field of practice is working to define systemic investing. This begins with the simple but critical understanding of a system as a complex set of interrelated elements that are working together to produce an outcome.

A system could be a community, an organisation, an economic sector, a city or a country. Systems change therefore refers to a deliberate effort to alter the way a system acts, with the goal of achieving a preferable outcome. Acting with a systems lens involves both a different mindset and approach, alongside a suite of tools that allow for understanding and influencing a system.

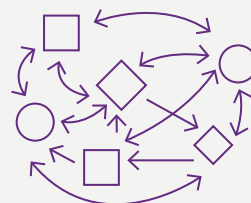
With this simple outline in mind, systemic investing is an investment logic which sits at the intersection between systems thinking and finance.



To drive systems change, our investment logic needs to also have a theory of change aligned with the reality of how change *actually happens* in the real, complex and messy world. As Jess Daggars from TransCap Initiative says, “A key differentiator of systemic investing from traditional impact investing is the question of how change happens.”

The traditional investment logic treats the world as complicated – like a machine to be optimised. This logic assumes parts fit together in an efficient order, can be controlled, separated and optimised in isolation to improve the overall functioning of the machine. This ‘machine’ paradigm at best creates slower and less effective responses and at worst is dangerous and counter-productive for society when we implement strategies for change. This is because the world is complex, not complicated.

Complexity recognises an ever-changing set of conditions, dynamic flows between inputs and outputs and intangible relationships that shape connections between parts of our systems.



Put simply, systemic investing is purpose-led investing based on a real-world understanding of how change actually happens.

The traditional finance paradigm based on optimising an economic machine has been incredibly powerful in driving towards its intended outcome: profits and growth. Unfortunately, this goal has led to crises where the externalities like climate change, biodiversity loss, potential breadbasket failure are major threats to our society and economy. To shift towards the more complex goal of a safe, resilient, robust and just future, we need a financial paradigm that recognises the full set of relationships between our natural and human systems. This includes understanding the nature of interconnectedness, the power of positive and negative feedback loops, going beyond direct effects and towards multi-order impact, and appreciating and taking responsibility for externalities.

Investors participating in systemic investing understand how the future emerges from disruption and how they can benefit. As Dominic Hofstetter (CEO and founder, TransCap Initiative) writes:

"once we understand a societal issue through the frameworks of causal loop diagrams, actor maps, and leverage points, it becomes possible to develop a transformative theory of change, which enables the development of a funding architecture."

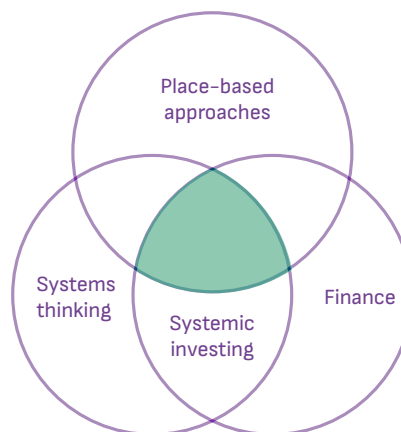
This approach is only possible when the relationship between capital holders and change-makers is a true and creative partnership. However, our current funding tools of deal structuring, term sheets and impact reporting create separation, entrenches power and most critically crushes the creative potential of emergence. As the famous R. Buckminster Fuller quote recognises, "there is nothing in a caterpillar that tells you it will be a butterfly". The traditional investment paradigm fails to recognise that systems exhibit novel and non-linear behaviours that are not predictable from the sum of their individual parts. The traditional finance paradigm demands certainty and simplicity over the real-world reality of emergence and complexity. As a result, we have an impact landscape full of inspiring caterpillars and very few butterflies.

A funding architecture underpinned by a systemic logic connects investors and philanthropists with those who can actively shape real-world change. This approach harnesses the self-organising value that emerges and embraces the power of the unexpected, rather than remaining constrained by fixed mindsets and short term, linear and first order measures of progress.

Systemic investing means creating *"a coherent combination of intent, mindset, and method which — when operationalised — leads to an investment approach that is markedly different from sustainable and (traditional) impact investing"* (Dominic Hoffstetter, TransCap Initiative).

Success measured by real-world improvement brings focus to the opportunity presented by place-based change. From a systems perspective, communities and regions are a particularly useful scale to act and test new investment strategies for change. It is at this scale where stressors and crises are felt, consequences can be seen and experienced, and integrations of new pathways are shaped. Hence it is by design that current systemic investment leaders are looking to partner with place-based organisations aimed at driving systems change (like Regen Melbourne).

There is great power in combining the idea of systemic investment with place-based change.



This report aims to make a contribution to the systems capital thought and practice—leadership by sharing emerging insights about what systemic capital looks in service of a vision to make the Birrarung Yarra River in Melbourne swimmable again. Our work is to demonstrate how resources (including capital resources) can be restructured to match the properties of the river as a complex adaptive system. There is so much that purpose-led investment must learn from the natural environment.

As the pioneering systems investor Danny Almagor (CEO and co-founder of Small Giants) notes, "systemic investors think about nurturing the forest, not betting on which tree will be the tallest."

For deep-dive analysis and definitions in this field please see:

- [Transformation Capital: Systemic Investing for Sustainability](#)
- [Centre for Systems Innovation: Design Foundations for Systems Capital](#)
- [TWIST: Together We Invest for Systemic Transformation](#)
- [Small Giants Family Office](#)



In the next chapter we explore these systemic investing principles to develop an approach for systemic investing as it relates to the swimmable Birrarung project.

CHAPTER 4

A SYSTEMIC INVESTING APPROACH FOR A SWIMMABLE BIRRARUNG

"Every crisis is, in part, a story-telling crisis. We are hemmed in by stories that prevent us from seeing, or believing in, or acting on the possibilities for change."

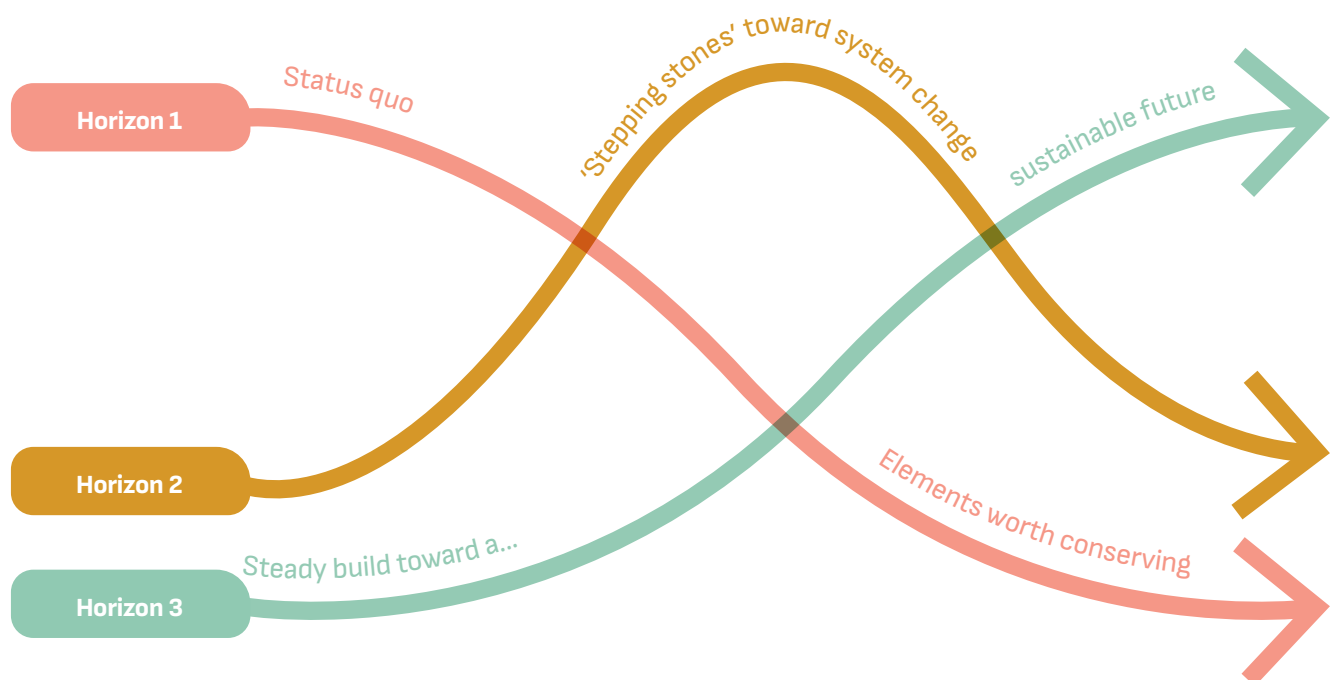
— Rebecca Solnit

Introducing Three Horizons

One important tool in systems thinking and the world of systemic capital is the Three Horizons framework developed by Bill Sharpe, a systems thinker and futures practitioner, and adapted by many others.

The model describes aspects of the future that are visible in the present, and how they morph and change over time. Sharpe describes these aspects as "horizons". In the context of a river transformation, this model helps us visualise not just how our river could look in the future, but also describes the nature of the change that is required to get there, grounded in real-world context. It does this by defining three horizons:

- 1) **Horizon 1** – the current state, the status quo, where we are today
- 2) **Horizon 2** – the stepping stones that are required to bridge between what is and our overall vision
- 3) **Horizon 3** – a transformed system, recognising that elements of Horizon 3 already exist (especially upstream), simply not in a dominant enough way



Three horizons vision for a Swimmable Birrarung

As we shift across the horizons (below) a few important things are happening:

- 1) Firstly, we see this is a **cross-sector challenge**. River health touches on almost all industries across our city. The benefits of a healthy river are experienced across sectors including tourism, health, water, energy, and property development to name a few.
- 2) Secondly, it is a **multi-intervention challenge**. Smart technology, policy, storytelling, civic engagement, nature and engineered solutions will all be required.
- 3) Thirdly it is a **multi-scale challenge**. Good projects will emerge from the backyard, at the park scale to larger regional, upstream engineered solutions.

The multi-dimensional nature of the challenge highlights that sustaining change requires investment in integration and strengthening capabilities across actors and projects.

Across the horizons there is also a deeper shift at play. Transforming the Birrarung is not only about how the river functions in the city system but how we all have a stake in it.

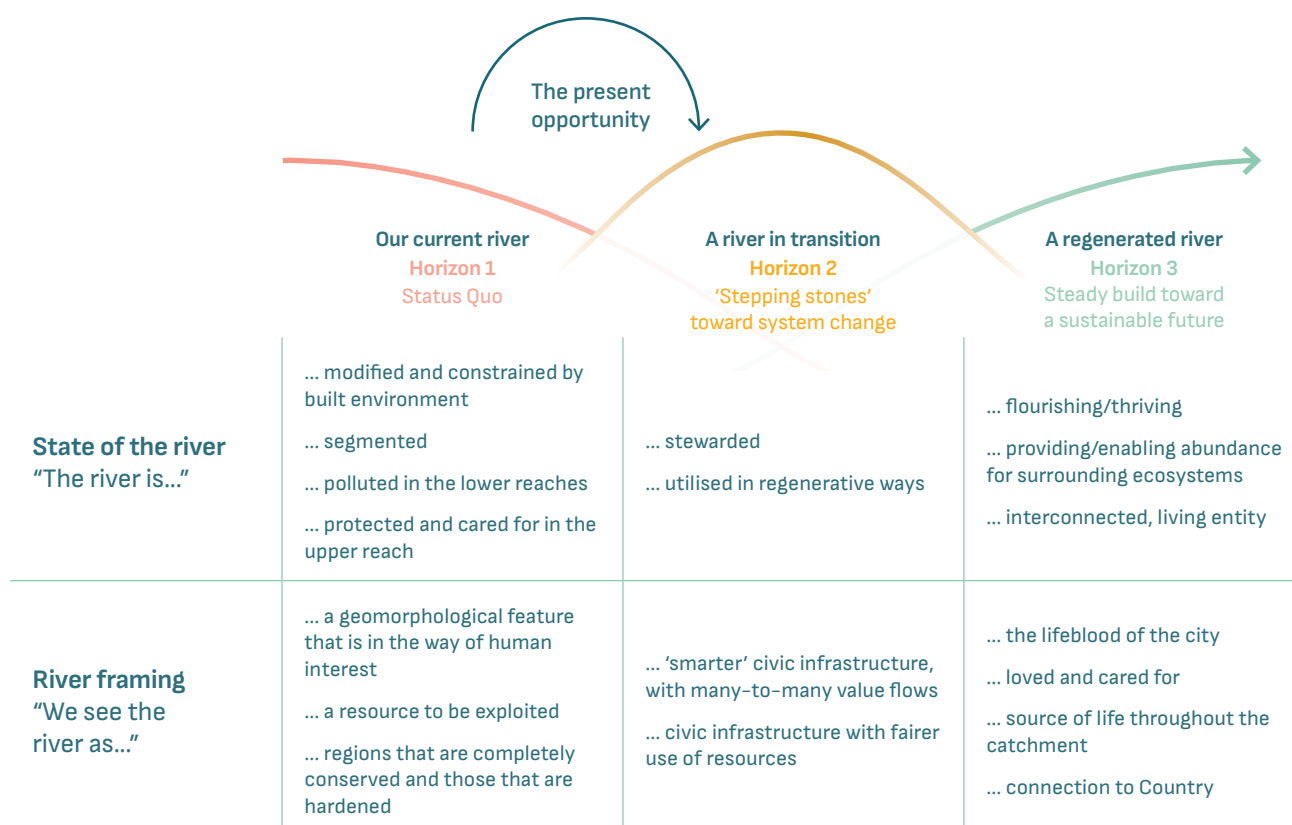
It is a shift in our relationship with the river.

Across the horizons, the river, as a living, integrated entity, moves from 'protected' to 'stewarded' to 'a lifeblood'. To protect is to keep safe from harm and injury. To steward is

to take care of something. A lifeblood is an indispensable factor or influence of something that gives strength and vitality. Currently, the systems which organise our city tend to position publics as passive stakeholders of a dirty river. Stepping through the Horizons, there is a path where the people of Melbourne become activated participants and beneficiaries of a healthy river. As we move towards Horizon 3, the river becomes intrinsically linked in our psyche where ongoing river health is understood as intertwined with our own health and resilience. For First Nations people this concept is intuitive. Stewardship approaches to our environment have enabled a 60,000 year old still-surviving culture. Re-connection with First Nations perspectives is not just a nice to have – it is the leadership needed to shape our society and economy towards a thriving river.

The Three Horizons model recognises that jumping directly to the third horizon (to the desired future) is not possible. There are steps along the way to create the services, connections and changes that are needed across sectors. In many cases there will be a need to create and invest in structured re-alignment, rewiring and re-connecting the flow of resources as intermediary steps.

Systemic investing has a role to play in the messy space in-between these transitions from horizon 1 to horizon 3.



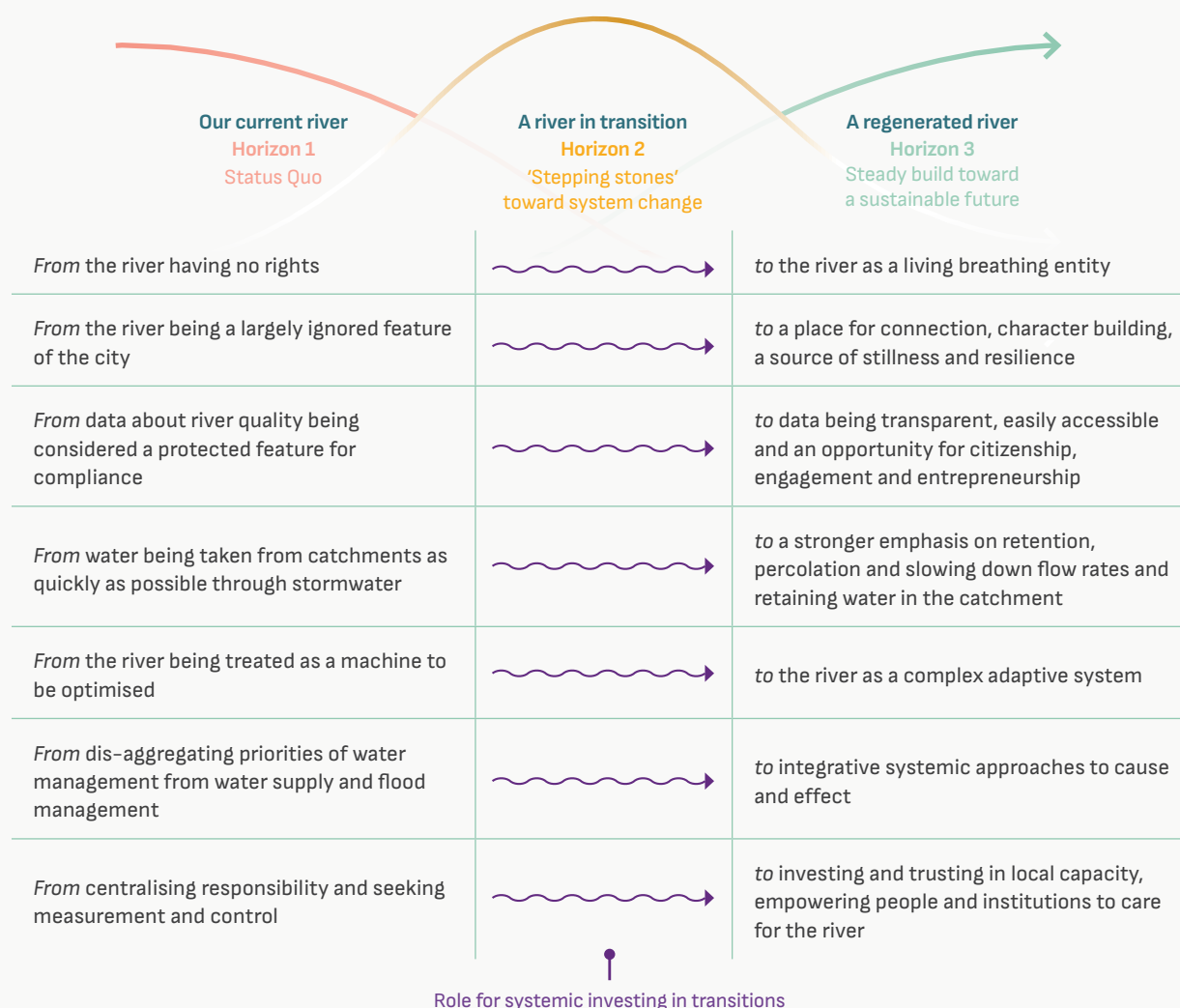
BRIDGING VISION AND ACTION

Systems thinking challenges us to coherently link a vision for a swimmable Birrarung to a theory of change that is then enacted through investment in a portfolio of tactical projects and interventions. Across this process we have identified three key mindset-shifts needed to accelerate action at the intersection of systems change and finance:

- 1) How change happens:** we are seeking to shift the investment paradigm from a mindset of current state scarcity to future state abundance
- 2) Partnerships and collaboration:** we are seeking to build the capacity for deep partnerships and funding architecture that supports many-to-many relationships
- 3) It's about quality, not quantity:** we are highlighting the need for a new investment paradigm to unlock systemic value.

TRANSITIONS REQUIRED FOR A SWIMMABLE BIRRARUNG:

Systemic investing has a role to play in the messy space in-between these transitions from horizon 1 to horizon 3.



Mindset Shift 1: How change happens

Our research has identified a suite of systemic capital challenges in relation to the Birrarung River. The combined result of these systemic challenges is that good projects and good ideas continue to stall, leaders ready to shape change are under-resourced, and deep capabilities that we know exist across Melbourne are not being leveraged to their full potential.

To understand the deeper reasons why these potent capabilities and catalytic projects are under resourced, the table below shares insights we found about the mismatch between the current state investment paradigm and the future state investment paradigm that would be needed to serve a swimmable Birrarung. While the insights are focused on the regeneration of a river system, they speak to fundamental challenges with the current investment paradigm and structural limitations for deep impact. The barriers we found that exist locally are echoed by systemic capital practitioners globally.

At the crux of the challenges identified below is that the dominant investment paradigm prevents structuring systems-level value by largely ignoring the value of money in context. Much of Australia's investment landscape is governed by an investment paradigm that is geared to today's financial interests and largely devoid of how it influences the context in which value is created or extracted. This is a fundamental blocker for the application of systems thinking in finance because, by design, it separates real world value from investment paradigms.

As an example, during this research a CEO of an investment firm reflected that 'Superannuation is three trillion dollars that is not being deployed to make the world you retire into better'. The result is one of Australia's most significant pools of capital is saying 'give us your money and we will manage it for your retirement. But we are not going to make any guarantees about the nature of the world you will retire into.' Investing in a current state economy that is driven by narrow growth and profit motives while knowing that this mode is creating significant negative mid- and long-term harms, remains the norm.

CHALLENGES AND OPPORTUNITIES TO SYSTEMIC INVESTING FOR A SWIMMABLE BIRRARUNG YARRA RIVER

	Current state	Future state
Scope	Valuation is often at the single asset level and requires simplification where societal needs are disaggregated into sub-systemic units and indicators. Silos in government and industry result in spending which optimises around one-dimensional outcomes.	The Birrarung Yarra River is one entity, fully connected from its source to its estuary and has an aligned investment logic. A thriving river is a process, not an end state, learning occurs when feedback is produced through actions that interact with each other and with their external environment.
Timeframe	Investment logic struggles to account for long-term benefits and disproportionately values short-term benefits. Risk and return logic is based on measurable, static current state revenue options.	Investment is guided by a long-term transformational societal vision for a Swimmable Birrarung Yarra River and recognises that progress will be non-linear and require prototyping, learning and refinement to mitigate risk towards a vision.
Accounting	The systemic risk and liabilities associated with the river are underestimated and dominant strategies are not positioned to take advantage of the transformational opportunities and systemic benefits of a regenerated river. Questions around "who pays" remain contested – as the river is a public resource.	Valuation accounts for the combinatorial value of a portfolio of initiatives and the emergent economic uplift that happens when a river thrives. Valuation accounts for adaptive capacity achieved through investing in community, intermediary and aggregation services.
Enablers	The current state applies economies of scale logic, generally optimised around water supply. River health data is limited and compliance focused. Partnership and blending capital is hard.	Scale is achieved in regional-level innovation, focused on capacity-building, enhancing trust and participation through strategic, multi-layered interventions. Novel partnerships between investors, government and other institutions who shape change are common. Data is abundant, accessible to citizens.

The lack of grounding in real-world context means both **liabilities of inaction and the opportunities of change are wholly underestimated.**

For example, if the river remains dirty, the health and living standards for our population will drop. We will be exposed to more extreme flood events and have less opportunities for respite from a warming climate. The businesses operating across Melbourne, insurance companies as well as banks carry a suite of multi-faceted liabilities associated with an unhealthy river. Both government and non-government institutions across Melbourne often unknowingly bear the risks of sustained biodiversity loss, human health issues, heat stress, disaster risk from flooding or water supply, urban heat as well as the reputation and political risk and other economic loss e.g. from tourism and land value losses. These represent just a few of the liabilities that will be exacerbated overtime if the health of the river declines in Melbourne.

The upside cultural and economic development opportunities presented by a swimmable Birrarung are equally immense. This could take the form of land value uplift, healthy active citizenship and new economic development opportunities. On page 18, we tell a speculative story of the immense value that could be generated through a swimmable Birrarung river. This is a story of systems change based on the insights we heard from stakeholders across Melbourne.

What is clear is that a dominant investment paradigm that separates value from context has resulted in short term profits while creating long term liabilities and missed opportunities for social, economic and ecological gain from a healthy river.

An emerging systems theory of change – defining the abundant investment paradigm

Systems thinking applied to finance brings the real-world context into the theory of change. Through our research, we conceptually describe how investment can be (re)structured to unlock systems level value. There are three main sources of systems value that are often unaccounted for in dominant investment paradigms:

- 1] The value of strategic synergies, benefit maximising, value stacking and other methods to account for the multifaceted real-world benefits of projects.
- 2] The value uplift associated with citizens empowerment, local knowledge, cultural connection, and the adaptive capacity this unlocks.
- 3] The emergent value, including broader economic development opportunities that a healthy thriving river could bring to this city, state, and nation.

The culmination of accounting for these would be to tap into a cause-and-effect connection between the ability to increasingly integrate and maximise value across both breadth and depth. **We call this the abundant investment paradigm.**

By contrast, an investment case that applies a scarcity mindset is based on optimisation and reductionist approaches resulting in silos and single asset thinking. In the scarcity paradigm accounting for risk and return rely on measurable costs and benefits that discount values such as improved social cohesion and resilience and possibilities for sustainable economic development. An abundant investment paradigm incorporates strategic synergies from value stacking and emergent systems effect from empowering citizenship. This investment case leverages the intangible, non-accountable values such as social cohesion, community gathering, placemaking, reconciliation, cultural healing, and social health from engaging with place and learning about natural ecosystems and cultural heritage.



Why we need to shift from scarcity to abundant investment paradigm

We have adapted the Three Horizons framework to conceptually show how an abundant investment paradigm would tap into systemic value uplift effects. The purpose of this framework is to creatively explore constraining features of change and opportunities for growth. It adapts the three horizons framework while getting clearer on how change happens as we shift through the horizons. The framework does not represent a definitive view on how things in Melbourne are or how they could be. The real world is more complex and there are many stakeholders operate in a variety of ways. Instead, this is a tool to help creatively explore the coherence between the investment paradigm and the vision for a swimmable Birrarung.

The abundant paradigm is to realise the integrated nature of the problems and tap into the potential value of systemic transformation. But we also recognise that this is hard in the dominant investment paradigm. As an impact funds advisor noted, the challenge for investment is 'ultimately there is a limit to ambition because finance is very risk averse'. These risks are not about real-world long-term risk, but rather the current state and short-term risk for capital. This definition of risk is a fundamentally constraining feature for systems change and has resulted in a suite of decisions, structures and investments that have led to one of Melbourne's greatest assets becoming unhealthy.

In the case of the Birrarung the scarcity paradigm is intertwined with an incumbent strategy for water management. It is the result of hard-fought, positive wins for centralising water management and externalising the cost of river health in urban areas. This path has been built on principles of reliability, security and control – attributes which are pervasive because in many ways they have served society well. The scarcity investment paradigm is often followed with good intentions – to mitigate risks and guarantee supply and clearly delineated roles and responsibility for water supply and catchment protection. In Melbourne, this is centralised to Melbourne Water and associated utilities.

The problem is that by narrowing and centralising, this strategy devalues the benefits of complex adaptive systems i.e. a thriving river. Embedded in the logic is that societal access to the water resource deteriorates it – the value uplift potential of increasing agency is missed. We see this in Melbourne where priority focus is on maintaining the value of already conserved areas instead of investing in the potential values that come of community care for the river. Strategic synergies and symbiotic value are often also unaccounted for. These include the benefits of urban cooling, footfall increase with associated retail spend, better public physical and mental health from activity along the river, carbon capture through native vegetation on the riverbanks, land value uplift, reduced operational cost for water utilities to treat water, and the return of life and biodiversity (including keystone species like platypus, eels, wedge tail eagles).

In the dominant investment paradigm water is optimised through the lens of water supply security and seeks to protect society through guaranteeing supply. The problem is this framing often misses out on the value uplift potential because responsibility for guaranteeing supply rests wholly at the institutional level. It creates unmanageable liabilities – where private investors and society more broadly usually look to governments to mitigate growing liabilities. If the responsibility for river health is centralised, society looks to large institutions (ultimately government) to pay for liabilities. In a world of increasing crises, these costs become unmanageable. This relationship where the responsibility is shifted to government has substantial allure but is increasingly untenable against the backdrop of meta crisis.

We now live with the externalities of a scarcity paradigm coming home to roost. The summation of the scarcity logic means we miss out the ability to tap into emergent values and ask what-if questions. What if the river running through Melbourne was healthy enough to swim in? Who might be inspired? How might this ignite creativity and build the character of the city? How would this engagement enhance the adaptive capacity and disaster resilience in the city? What new businesses or markets could be established if Melbourne were able to achieve this goal? We are exposed to the liabilities of these decisions, and we are not tapping into the immense opportunities of a healthy, swimmable river.

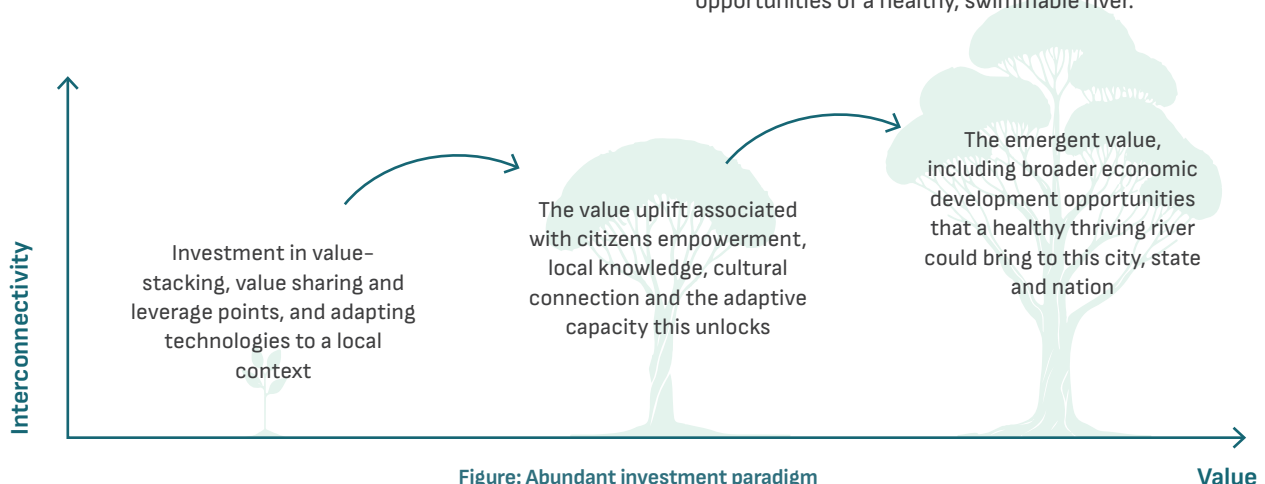


Figure: Abundant investment paradigm

Mindset Shift 2: Partnerships and Collaboration

The abundant investment paradigm highlights that sustaining change requires investment in integration and strengthening capabilities across actors and projects.

A swimmable Birrarung will require a variety of novel partnerships. There are many stakeholders, many interfaces among communities, governments and businesses and many beliefs about what the river represents and how it should be valued.

Delivering the project portfolio that works in service of a swimmable Birrarung requires partnership and collaboration across different aspects of project delivery as well as partnerships between capital holders and those who shape change towards multi-beneficial outcomes. As Dominic Hofstetter from TransCap Initiative writes:

"What is needed to enable a diverse set of actions is a funding architecture that matches different kinds of capital from different types of capital providers to different kinds of systemic interventions, as well as an orchestration mechanism that allows for the strategic coordination of these capital flows."

This is hard. Establishing successful partnership between those who shape change and investors requires not just resources and capability development, but aligned intent. As one CEO and advisor notes:

"The stakeholder engagement and management and the bringing together of all these different tribes who tend not to know or speak or play with each other on a regular basis makes things hard... There are a whole bunch of people who aren't natural bedfellows – it's hard to bring all of those groups together and to wrap a structure around what you are trying to do and have them all agree to that structure."

Novel partnership between different types of capital is likely to also be required. This is also rare in the Australia investment landscape. As an ex-CEO of an impact funds manager reflects:

"We do not do blended finance well [here in Australia]. Philanthropic and investment capital don't cooperate with each other. A philanthropist would rather achieve less than help an investor. The inability of those sectors to work together is very frustrating."

Funding agencies are not geared to work the many-to-many partnerships required to support ecological and social systems change. Responding to the challenge of "who pays" also demands novel partnership and services that can slice and dice value differently. As another founder of an impact funds manager describes "Fund development with multi-stakeholders has a high orchestration and design cost – it's not clear who pays for that."

There is a need for greater recognition of the partnerships required to successfully pull off projects. For example nature-based regeneration, multi-scaled stormwater retention and other catchment improvement projects all require partnership across design, research and implementation. When this need for collaboration goes unrecognised and unfunded the potential for systems change evaporates.

Building off the insights developed here, we have developed a conceptual model (page 16) to visualise the progression of collaboration and partnership that will be required as we shift towards a systemic investment paradigm.

Success will require the investment ecosystems to be open to the messiness as the river transitions. Just as our river systems need to slow down to allow richness to emerge, **making the river swimmable means creating the space for ideas to percolate and meander.**

There are three shifts in the nature of collaboration:

- 1) The initial shift is from siloed responsibility for river health to new partnerships that work across silos that are resourced to move through all project stages – from inception to delivery. We know nature based urban regeneration and other good projects to improve water retention and catchment health requires us to work together differently. We also know that there are funds available for this work that are unspent because the work to convene and build these partnerships or other collaboration is not recognised in fund eligibility. Paying for what it takes, including the collaboration and partnerships needed for project success, will unlock systems value.
- 2) The second shift requires even more multi-dimension partnership. Just like a prominent impact advisor notes, “if you invest in one dimensional outcomes, you get one-dimensional impact”. Multi-dimensional outcomes require multi-dimensional partnerships. As we transform the river a suite of new services and mechanisms will emerge to unlock the many-to-many relationships that can create new value.

- 3) The third shift represents a shift to a final state where the river is more commonly understood as our lifeblood. Where citizens and organisations act in a way that is intuitively geared towards care and stewardship for the river. This model is supported by complexity science – where there are thresholds of complexity that a system must exceed before it can exhibit self-organisation. In other words, a system must attain a certain level of complexity before it can interact with an environment in a way that increases its own organisation (A Third Window, Ulanowicz). Emergent value will spawn through trust and resourcing the partnerships that work in service to complexity, in service to life. This is the space where the caterpillar turns into a butterfly. It is a practical path to *nurturing the forest, not picking the best tree*.

An abundant investment paradigm recognises the need to ramp up the powerful catalytic forces latent within the complex interrelationships among communities, entrepreneurial collaborations, local diversity, and a flood of ideas through enhancing the partnership, collaboration and organising power of places and regions. Underlying this is a trust that allows cultural vibrancy, self-determination, identity, and community to fuse together in unexpected ways to create new and profound opportunities.

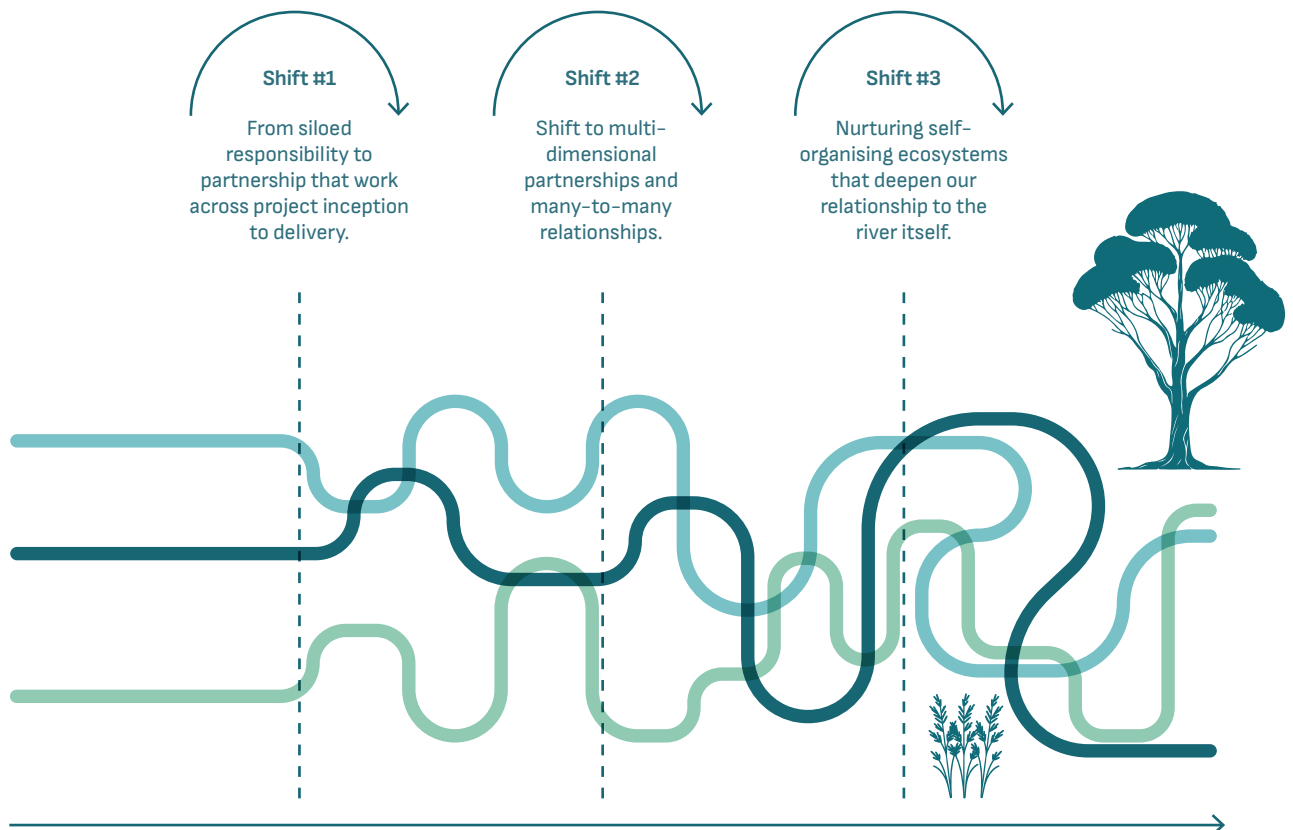


Figure X: Increasing interconnection of collaborative relationships for river health

Mindset Shift 3: it's about quality, not quantity

This action research has explored both the quantity and quality of capital flows around the Birrarung Yarra River. Capital quantity refers to the amount of money flow or available to fund river regeneration. Capital quality is the underlying investment paradigm or theory of change that guides how these funds are spent. The importance of interrogating the nature (or quality) of capital flows has been explored in depth throughout this research. However, a majority of efforts in purpose-led capital continue to focus on increasing the quantity of impact capital. It is therefore critical to highlight the need for an overarching mindset shift from quantity to quality, in order to challenge the dominant finance paradigm.

There is a need for those exploring the role of finance for a resilient, sustainable and regenerative future to shift focus from increasing the quantity of impact capital, towards considering the quality of impact capital.

Three core reflections have supported this mindset shift throughout this research:

1) There is already a great quantity of unallocated impact capital.

We know there is substantial capital earmarked for environmental and climate related projects that remains unallocated. As one investor says 'Institutional investors have a growing unallocated pot of funds seeking a pipeline of green investments'. We are also aware of substantial philanthropic and grant capital that is waiting to be spent on deep environmental and social regeneration projects, including at foundations, water utilities and private wealth. These are potentially transformational funds that remain under-spent. The aggregate of these funds indicates there is money available right now to support nature-based solutions, cultural programs and capacity building across Melbourne, all categories aligned to a swimmable Birrarung. As one investor noted, 'There is a wall of capital trying to resolve problems and a system that is not very good at landing that capital in the right place'.

In practice this means that using a quantity lens to effect systems change is severely limited. We need to expand our imagination away from the enticingly simple idea that we can find large, investable single vehicles for systemic change. Much of our immediate effort needs to shift towards encouraging experimentation and innovation in the methods of finance, in order for future (large-scale) impact capital to be truly transformational.

2) Innovation processes require niche investments across multiple leverage points

Shifting to a "quality" lens opens more productive conversations about prioritisation, potency and scale. This approach recognises that innovation processes required for any significant leapfrog inevitably start small and niche, before triggering either scale or replication. Designing and investing in multiple 'leverage points' (many of which will be experimental in nature at the outset) rather than applying traditional forms of economy-of-scale logic has a greater potential for transformational impact. This is the case for the Birrarung where a multitude of actors are ready and waiting to act in service to the river but are unable to access capital flows. Frustratingly, there are funders ready to support action in service to the river but inflexibility in funding structures prevent capital distribution.

A shift to interrogating the quality of capital flows opens up the potential to support portfolios of small, novel, systemic investments that can catalyse much greater shifts. Building portfolios of interventions and investing in the strategic/systemic coherence between interventions aligns with an investment logic that aims to: invest, connect and inspire. This is a significant shift away from the dominant investment logic which remains: invest, compete, win.

3) An overemphasis on quantity of capital risks reinforcing old patterns

The emphasis on the quality of capital is not to diminish the need for large capital flows directed to the service of life – very large (institutional) capital will be needed to transform the Birrarung. However, positioning the blocker for transformative impact through a quantity lens reinforces old patterns and structures instead of bringing focus to the real work of building new patterns, new structures, new paradigms for investment for transformative impact.

Sometimes we need to slow down in a crisis. The systems capital work on the swimmable Birrarung project challenges the potency of simple calls for more spend and bigger projects. More money into the same paradigm will not solve the problem, in fact it may reinforce old economy structures. Even minor tweaks to the logic for how existing budgets are spent so that they more coherently connect to real-world systems value uplift is a more potent application of efforts. This remains an open invitation to the investment community to explore how to shift the quality of capital towards an alignment with systemic change.

Invest millions, connect billions and inspire trillions for a Swimmable Birrarung

A speculative story of transformation

imagine if... the swimmable Birrarung project established an integrated social, environmental and economic vision. With a vision, a series of points of strategic leverage were identified which attracted catalytic investment to tactical projects. Community members bought into the epic challenge. Key and interconnected initiatives breathed life into the vision, creating the momentum and overcoming the risks perceived by cautious investors. Critically, the scale of action was regional — small enough for individuals to hold a stake and large enough for collaborative actions to make an impact. Investment recognised the governance mechanisms needed to understand how each other's individual actions contribute to a thriving river. The multi-scale investment logic unlocked potential at the household, the street, the community and regional scales. Experiences were shared which stimulated more local enthusiasm, more good ideas and more positive action. Small wins started to spawn new wins — one plus one starts to equal ten.

Governments had community support for a vision of long-term catchment health, providing subsidies, investing in integrated outcomes and actioning regulatory changes to drive adaptation through manufacturing, urban development and housing design, nature-based solution and local stormwater management to name a few. Critically, the adjacent policy areas were connected to the importance of a thriving river system. The Federal Government supported this vision and made an initial investment. Subsequently the private sector adapted its resources and ingenuity to support the vision. Businesses from plumbers, architects, manufacturers to insurance and banks saw opportunities and tailor their offerings and invested for integrated outcomes. Innovations started to spring up in unexpected places. Little of this could be planned centrally because there is a randomness, a non-linearity to how it occurred. Individual actions compounded, so, in a sense, one plus one started to create 100 — perhaps even 1000.

Making the Birrarung Swimmable was a political win. The premier made a significant speech to parliament declaring: "Victoria is a world leader in regenerating urban rivers. We must capitalise on the world-class knowledge and expertise that will be in increasing demand as the rest of the world seeks to adapt to climate change." They said "there is a golden opportunity here for exporting hard-won skills and leveraging the innovative solutions learned locally to establish a major new export industry for the state." The long-term legacy of achieving a swimmable Birrarung was the imagination it engendered in generations of young people. Creative people with good ideas were attracted to the city because they felt empowered to act. Education, entertainment, technology was just some of the sectors in which billions have been invested and made. The capacity to respond to opportunities as they continue to emerge now exists. The sum of action creates 1000+.

It was impossible to foresee the many ripple effects of this transformation — all the businesses, cultural effects and stories that emerged and how this influenced new global investment practices around systems change. But Victoria's swimmable Birrarung strategy was recognised as having a strong leadership role. The sum of all the parts is so substantial it is not worth quantifying.

CHAPTER 5 NEXT STEPS

The purpose of this research report is to explore the context and pathways forward to activate capital in service of a swimmable Birrarung.

At Regen Melbourne we are identifying an emerging portfolio of projects based on the last three years of engaging with and learning from the river ecosystem.

These Projects are to act as leverage points and their choice is based on an assessment of their potential transformative value. There are sophisticated actors across Melbourne who are, in their own transformative ways, working towards this goal right now. We also know of innovative capital across Melbourne who are ready to test new approaches.

As a result of our foundation research, a formal collaboration has emerged that we are calling **Melbourne Invests for Systemic Transformation**, or MIST for short. This is a collaboration dedicated to nurturing a paradigm shift in purpose-led capital and actively prototyping investment vehicles at the intersection of systems thinking and finance. Convened by Regen Melbourne, MIST includes local capital holders and fund managers, alongside national thought leaders including [Small Giants](#), [Climate-KIC](#) and [Centre for Systems Innovation](#), and international systems partners like [Dark Matter Labs](#) and [TransCap Initiative](#).

Finance brings structure to exchanges in our system that benefit from structure. It creates skin in the game. It makes the invisible, inherent notions of value that we hold visible. It exposes the deeper ways in how you see value shaped. We hope this conversation can open an opportunity to test how we can work together to tap into systems notion of value uplift. This is important because it's going to be easier when investors either explicitly or inherently understand these opportunities as 'leverage points' not just projects.

Our Yarra River, Birrarung, is recognised around the world as an iconic example of a nurturing relationship between a river and its community. Flowing from source to sea, it is the resilient lifeblood of past, present and future generations of Victorians. It connects and enriches our flourishing city, suburbs, regions and beyond.

— [Yarra River 50-year community vision](#)
[/ Wilip-gin Birrarung murrn](#)

