BUILDING CIVIC CAPITAL

COMMUNITY FOUNDATIONS OF CANADA
all for community

FUTURE CITIES CANADA

EVERGREEN

La fondation McConnell Foundation

This booklet has been produced by **Dark Matter Labs,** the culmination of numerous interviews, discussions, workshops and a three day retreat with global partners.

The publication seeks to provide an initial intellectual and theoretical framing for **Civic Capital**, an initiative seeded and co-founded by a collaboration of the following partners : **Community Foundations of Canada, Dark Matter Labs, Evergreen (Future Cities Canada initiative), Maison de l'innovation sociale (La MIS), MaRS Discovery District and McConnell Foundation.**

We are extremely grateful to all that have contributed to the making of this so generously.

00 Dm

MIS Maison de l'innovation sociale

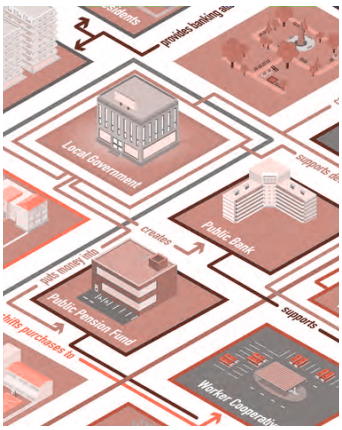
MaRS

WHO'S THIS FOR? WHAT'S THIS ABOUT?

Increasingly, actors globally—whether international organisations, institutional investors, civic groups and private foundations —are recognising that we do not have the financial instruments, models or practices, nor the specific strategies, to cope with the interconnected challenges of comprehensive environmental degradation and growing social inequity.
We believe that one of the best ways to tackle these challenges is to invest in 21st century civic assets and grow our civic capital.

The purpose of this report is to demonstrate that we have the mechanisms, if still embryonic, to innovate how we deploy capital for shared civic benefit.

This report reveals, through a collection of case studies, a wide range of examples to hint at pathways to a better future and shows the wide range of protagonists involved, be they municipal authorities working with large industrial players to test how we can monetise the avoidance of catastrophic events through innovative insurance brokering; public and private institutions joining forces to procure locally, leveraging what was anyway being spent and creating multiple benefits; or civic actors developing new housing models that enable citizens to gain equity while ensuring affordability in perpetuity



#S.01 Community Anchor Institutions (Cleveland)

#D.08 Vivacite's housing equity model (Montreal)

#F.03 Ike Dyke Resilience Bonds (Houston)

CONTENT

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SUMMARY

OUR CITIES ARE FULL OF
LATENT POTENTIAL

It's clear that we are facing uncomfortable truths: on our increasingly fragile planet, we would need nearly four earths if the whole world were to consume at the same rate as countries like Canada [1]. And in a world of interdependency, we are learning that the impacts of poverty and other social injustices can endure intergenerationally [2]. Increasingly, these pressures are both felt and exacerbated by cities.

Yet at the same time, our cities are full of shared assets. These assets go beyond the infrastructure that the public sector has tended to provide, whether bridges, parks or schools. They include both tangible (e.g. the earth-systems that support us) and intangible resources (e.g. the data that can support the predictive models to avoid future risks).

We believe that the pathway to tackling the multiple crises of our time is to grow our appreciation of the assets we have, and to steer financial capital towards them.

THE URGENCY

The unfolding reality of comprehensive environmental degradation and growing social inequity is highlighting just how interdependent and finite our world is.

Facing up to this reality, both in terms of our urgent needs and emerging capabilities, requires us to to come together to imagine and build a new system for raising and steering capital, one which represents our society's wealth in all its multi-dimensional forms of value.

For while we invest in our own individual gains, or organisational returns, from the equity trader to the parent who puts aside for their children's education, societally we are failing to invest in our collective future.

WHY?

While we increasingly recognise the scale of the risk — as we witness fatal heat-waves, wildfires and floods — and grow our understanding of the physical and mental harm of insecurity and loneliness, we lack the pathways to mitigate them.

We need civic capital.

CIVIC CAPITAL

Civic capital refers to our cities' shared assets — or resources —from which we collectively stand to derive most of our benefits, regardless of ownership.

Just as financial capital includes a range of asset classes (such as equities, debt, cash, alternatives) and sub-classes that are invested with an expectation of financial returns, civic capital includes a range of asset classes (preventative health-care assets, natural assets, data infrastructure assets etc.) which we can collectively invest in with an expectation of generating civic returns — returns that benefit our cities collectively.

This report seeks to highlight the pockets of innovation and replicable tools that are already being used to capitalise these civic assets. These first steps are here as an invitation to everyone — from derivatives traders to neighbours — to help us realise the present and future value of investing in our collective benefit.

CIVIC: *about the city; to do with municipal administration; relating to the duties or activities of people in relation to their city*

CAPITAL: *wealth or assets that can be contributed for a particular purpose*

BUILDING CIVIC CAPITAL

DEFICIT vs ASSET BASED APPROACH TO THE CITY

Our approach to shifting how we raise and steer capital can be built on one of two competing narratives about our cities:

- DEFICIT BASED: Focuses on the problem at hand and the tremendous capital deficits. For example, we hear about the mounting pressures of urbanisation in the face of deteriorating municipal infrastructure, the looming $6 trillion annual infrastructure capital shortfall [3], rising unaffordability of access to even basic human rights (such as shelter) and a 'winner-takes-all' dynamic seeing many vulnerable populations lose out.
- ASSET BASED: Argues that our cities are concentrations of a vast diversity of assets — human, cultural, natural, physical, social — and that our complex interactions with these assets can never be reduced to a zero-sum game; increased use of shared resources can, in fact, create increased multi-dimensional value for all.

While both narrative frames above can hold true, we find the second more meaningful. The first focuses on quantities (nominal over real value), which cannot represent our world in all its complexity. It sets us on an intractable public-private debate, with the conversation either descending into a rhetoric of austerity and limited public resources, or remaining centred on the idea of self interest and free market principles — even when history has shown us that financial capital, while necessary, will not by itself be sufficient to tackle the challenges ahead.

The second, on the other hand, both accurately depicts our reality and stands to influence a more human, more sustainable and more democratic urban future.

RE-APPRECIATING SHARED ASSETS

Our well-being, the resilience of our cities, and even the value of our private assets, depend on a range of resources which "can be used for the welfare and the utility of the community."

This knowledge is not new. Many (including Elinor Ostrom and those involved with the Commons Movement [4]) have used research and practice to highlight how we can and do use collective governance models to support and deploy these resources.

What is new to us is what we understand civic assets to include in the rapidly shifting context of the 21st century, and what mechanisms we need to invest in to support them. For example, as we learn that cognitive development relies on a range of influences — from clean air to early childhood nutrition — can we democratize knowledge by only investing in physical libraries, as Andrew Carnegie did in the 19th century?

Civic assets go beyond the infrastructure that the public sector has tended to provide — bridges, parks or schools. They include both tangible and intangible resources. The former are the earth-systems that support us — be they land, air, water, trees — and the latter include the data, relationships, governance competencies and predictive models that give us the ability to support the welfare of our communities and sustain our shared resilience.

THE NEED FOR CIVIC INVESTMENT MODELS

While crucial, a conceptual re-appreciation of such shared civic assets alone is not going to unlock investment. We also need clear pathways to capitalise them — making the most of them by converting their complex worth into investable assets. At the moment, our siloed, short-term, centralised and opaque financing and accounting systems are simply not capable of realising this.

This is not the first time the world has seen innovation in how capital is used to support civic assets. In the 15th century, Henry VIII created a 'betterment' levy to capture value for flood defences [6]; after the Great Fire of 1666, London invented private property insurance to fund shared fire engines [7]; and industrialists created mutually owned credit clubs in the 19th century to unleash mass house building [8]. In each age, civically minded individuals or institutions deployed newly available tools of regulation, investment, accounting, taxation or procurement to answer the pressing shared challenges of their time — or invented new tools where necessary.

WHAT DOES 21ST CENTURY CIVIC CAPITAL LOOK LIKE?

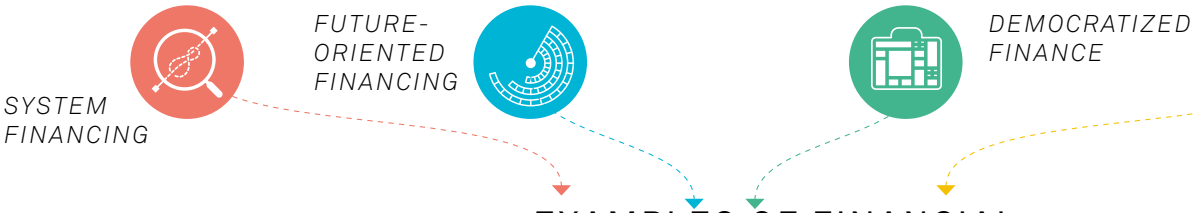
So the task at hand is to imagine what 21st century civic capital could look like, in an age of multiple technological revolutions, where we can:

- Monitor that private home-owners stand to benefit from land-value increases of up to 167% through transparent real-time immutable land registries [9]
- Analyse with increasing accuracy how the Canadian health service stands to lose $68 billion by not preventing chronic illnesses — through big data and AI analytics [10]
- Steer capital effectively to post-disaster recovery through crowd-sourced tweets and participatory governance mechanisms [11]
- Grow collective ownership [12] and individual value creation [13] by separating assets into their constituent parts thanks to the rapid reduction in administrative costs due to almost-zero computational processing cost

We argue that we have mechanisms, if still embryonic, to innovate how we deploy capital for shared benefit (see next page). This report reveals real-world examples that hint at such pathways to a better future and shows the wide range of protagonists involved, be they municipal authorities testing new taxes or alternative economy activists building complementary currencies.

Our collective task now is to figure out how to scale up these mechanisms, build up our capacity to grow and deploy civic capital, and therefore overcome a huge structural barrier (the deficit of financial capital for civic assets) to creating a better future.

EXAMPLES OF INNOVATIVE MECHANISMS



EXAMPLES OF FINANCIAL & FISCAL MECHANISMS

IN ORDER TO

CREATE SYNERGISTIC VALUE ACROSS SILOS

Anchor Institutions
A procurement strategy where local institutions agree to spend locally
#S.05

Collective Impact Models
An investment model which links mutually supportive interventions
#S.18

Complementary Currencies
An alternative currency system where tokens can only be redeemed locally
#D.15

INCREASE LIQUIDITY TO SCALE LONG-TERM INVESTMENT

Green Securitization
A financial model which turns asset's future related cash flow into support for debt
#F.21

Feed-in-tariffs
A policy mechanism designed to bring stability to nascent, volatile markets
Feed in Tariff (1)

Platforms & Exchanges
A piece of transparent infrastructure for investment & trade
#D.25
#T.04

CREATE ACCESS TO CAPITAL FOR BETTER INVESTMENTS

Cause Bonds
A debt mechanism which borrows off future cash flow in order to act today (e.g. catastrophic events)
Ifflm (2)

Future User-fees Backed Bonds
A form of municipal borrowing based off future cash-flow from user fees
#F.17

Mutual Credit Systems
An alternative currency system where participant offer credit without recourse to banks
#D.08

DRIVE COMMU OWNERSHIP T ALIENATION

Community Shares
A fund where loca can buy equity to projects

Mini Munici Block-chair
A low-threshold r investment (e.g. $ citizens, which ca chain enabled

Co-operativ e.g. energy
A governance mo citizens finance a energy generation

In response to barriers and structural issues with our financial system (highlighted in more detail on pages 18-19), there are already many real-world examples of innovative financial instruments and models, as well as a range of other complimentary tools, that are helping to drive what we see as the four desirable trends (systematic, long-term, transparent and democratized finance). These approaches are led by a variety of protagonists — from civic activists to traditional corporations, from local businesses to legislators — demonstrating the ways in which people can participate in our financing system. While they start to open up important new pathways, we need a variety of further shifts in governance (from legislative change to new social norms through awareness raising) in order to scale this path.

This page is only a partial snapshot, highlighting just a few mechanisms:

TRANSPARENT GOVERNANCE OF FINANCE

UNITY TO REDUCE

l citizens deliver local

#D.05

pal n bonds

municipal debt 20) for local n be block-

#D.04

es

del, where nd govern n assets

#D.06

QUANTIFY & SHARE RISK TO MAKE BETTER DECISIONS

Resilience Bonds

An insurance product which monetizes the avoidance of risk

#F.03

Social Impact Bonds

A pay-for-performance PPP which helps overcome short-term thinking & drive evidence-based regulation

#F.11

Sharing Insurance

An insurance product for shared ownership of assets

#D.13

RE-DISTRIBUTE ACCESS TO FINANCE

Credit Enhancement

A variety of financial models e.g. guarantees, grants, equity transfer subordinated debt

#D.09

Value-capture Mechanisms

A variety of tools (covenants, taxes etc.) which capture the future benefit from today's investment

#S.15

Investor risk-assumed loans

A loan in which the borrower provides interest when they can; rather than to an investor-set pay schedule

#T.06

LEGEND

#... Case Studies / Examples

Challenges/ Barriers

- Silo
- Short term
- Centralised
- Opaque
- Low Returns
- High Risk
- Complex Measurement

Different protagonists

- Financial (private or third sector)
- Public
- Civil

(1) https://en.wikipedia.org/wiki/Feed-in_tariff (2) https://www.iffim.org/bonds/

WHAT ARE 21ST CENTURY CIVIC ASSETS?

Our cities are brimming with civic assets — these are the resources from which our communities stand to derive many benefits regardless of 'ownership'. While focussing on ownership is helpful to bring order to our world, we believe (along with Nobel-prize winning Elinor Ostrom and others [14]) it has led us on a path of false dichotomies and arbitrary demarcations. These assets, after all, do not exist in isolation; what gives them their value is the surrounding functioning of our environmental, economic and social systems — our natural assets and human activities that shape the resource.

These civic assets go beyond typical municipal 'assets' (those that show on a city's balance sheet such as roads, streets, sewers and water systems). They include both tangible and intangible resources — from the social capital [2] that supports people's latent sense of civic duty to tweet about a looming flood, to the aquifer whose health reduces the cost of our flood-mitigation strategies, and provides our potable water (#F.02) . A civic asset-based approach therefore starts from what we already have and co-creates a management approach which maintains and enhances them.

"I divide the tangible assets of city-regions into seven clusters that include human, social, cultural, intellectual, natural, environmental, and urban assets...investing in them should be the principal task of local government."

JOHN FRIEDMAN,
The Wealth of Cities [15]

#CASE STUDIES
Throughout the document, case studies are used to provide evidence and explanation - any text in this format with a # references one of 100 case studies we have included in the appendix.

The four different colours (and letters) refer to the 4 trends:

#S.__	*System*
#F.__	*Future-oriented*
#D.__	*Democratized*
#T.__	*Transparent*

HOW DO WE INVEST IN THEM?

In establishing pathways to investment, the debate often gets sidetracked into a question of public provision versus private provision. In the first case, we end up with a rhetoric of austerity and a reality of limited resources, whereas in the latter, the focus is on efficiency and profitability. This is not helpful.

We (citizens, investors, public authorities etc.) increasingly recognise the need to invest in shared civic assets — with all that this involves, from maintaining natural systems to creating new organisational entities such as civic data trusts that increase access to data (see [5] for a variety of alternatives). But it often seems that we are systematically failing to raise and steer the capital needed to ensure the future of such collective goods.

AN EMERGING CLASS OF TECHNOLOGICAL ASSETS

At the same time, we are living in the early stages of a fourth industrial revolution, giving us previously unimaginable technological capabilities like automated payments from smart-contracts, real-time sensing and satellites, open and big data sets and distributed ledgers.

Alone, these technologies are not going to write the investment case for investing in our shared civic assets; however they support the case for doing so, as they give us better insight as to how, when and what to invest in.

ENVIRONMENTAL & NATURAL

Natural assets which we collectively benefit from.

e.g. the air from which we get oxygen, the trees that purify the air, the biodiversity that creates a healthy ecosystem, the water that sustains all life.

LAND/PROPERTY

These public and private assets often derive their value from surrounding investments; and are rarely fully utilised.

e.g. urban land near infrastructure improvements, underoccupied spaces (e.g. offices empty 60% of the time.

PREDICTIVE CAPABILITIES

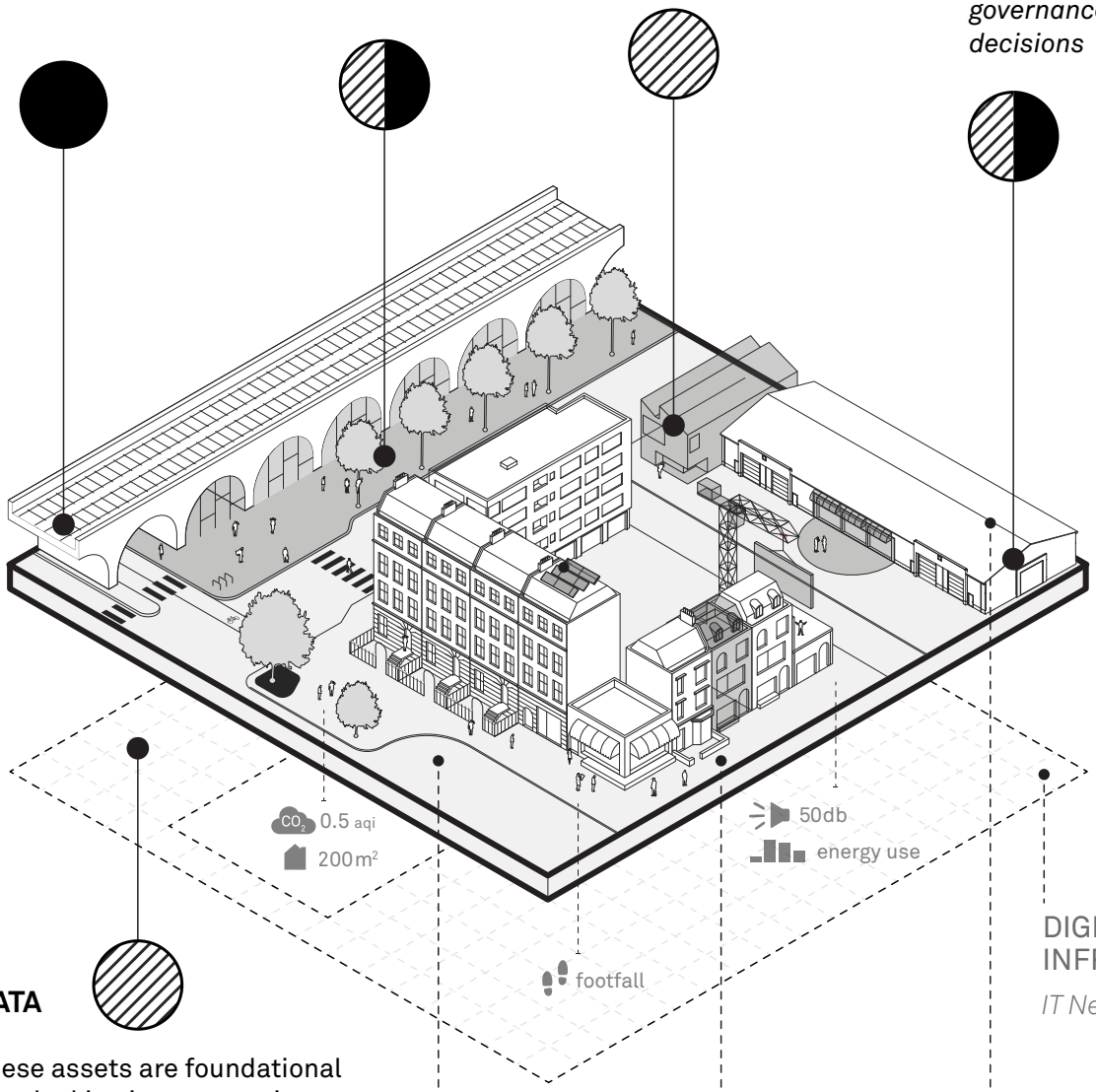
These assets stand to help us unlock the preventative and longitudinal funding we need

e.g. open source, industry-owned resilience modelling, impact monitoring and evaluation frameworks to drive experimental solutions.

HYBRID INFRA.

While the infrastructure capital shortfall is tremendous, there are new hybrid multi-level assets that can help bridge the gap

e.g. crowd-sourcing information to tackle flooding, participatory transport investment & governance decisions



EMERGING CLASS OF INVESTABLE CIVIC ASSETS

Tangible assets

Intangible assets

DATA

These assets are foundational to unlocking investment in any of these assets

e.g. APIs to enable data interoperability across actors, accurate sensors and AI powered analytics to tackle data deficiency.

BUILT INFRASTRUCTURE

Roads, bridges, parks, sewers.

TRADITIONAL 'CIVIC'

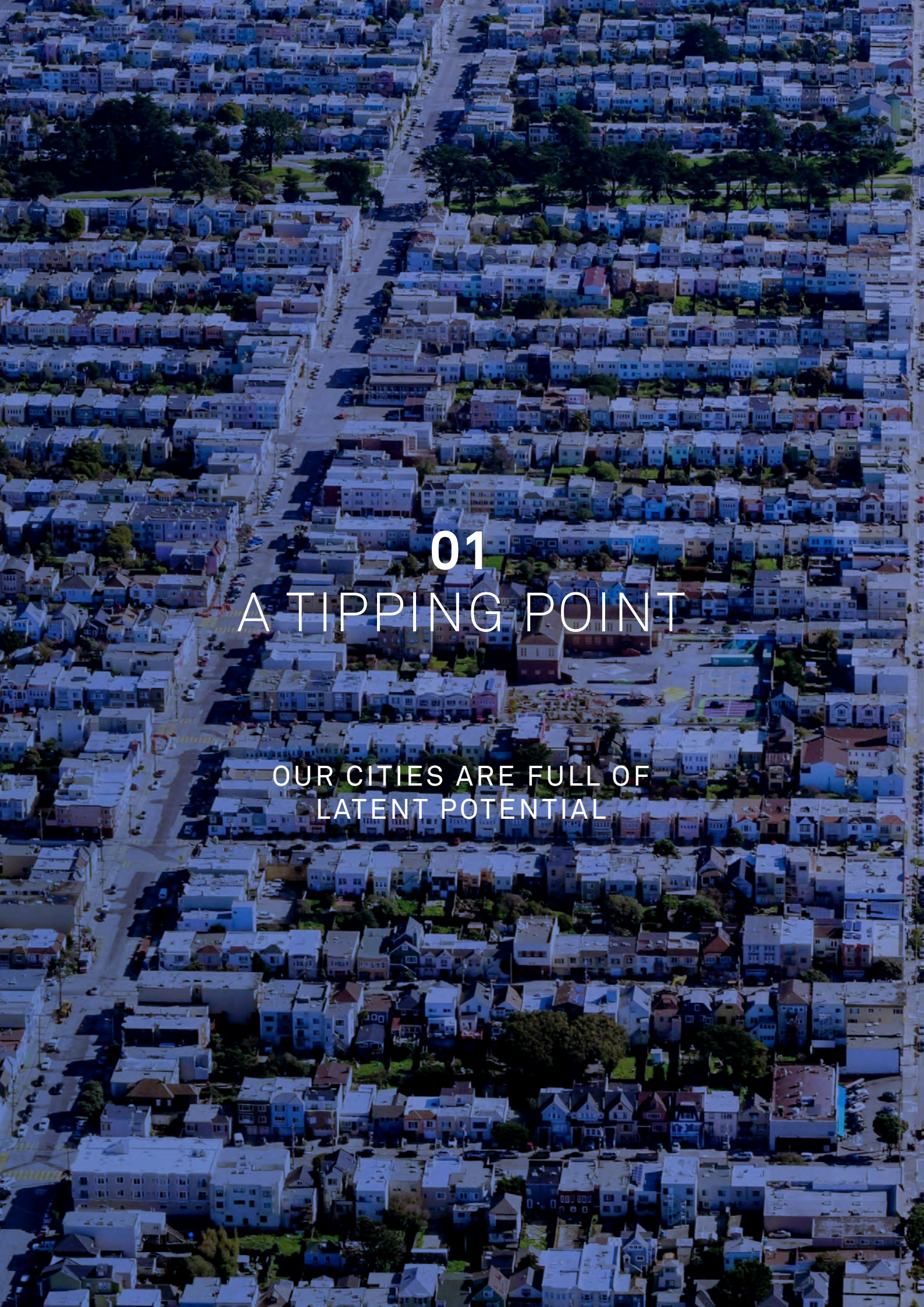
Libraries, schools, community centres.

DIGITAL INFRASTRUCTURE

IT Networks, software.

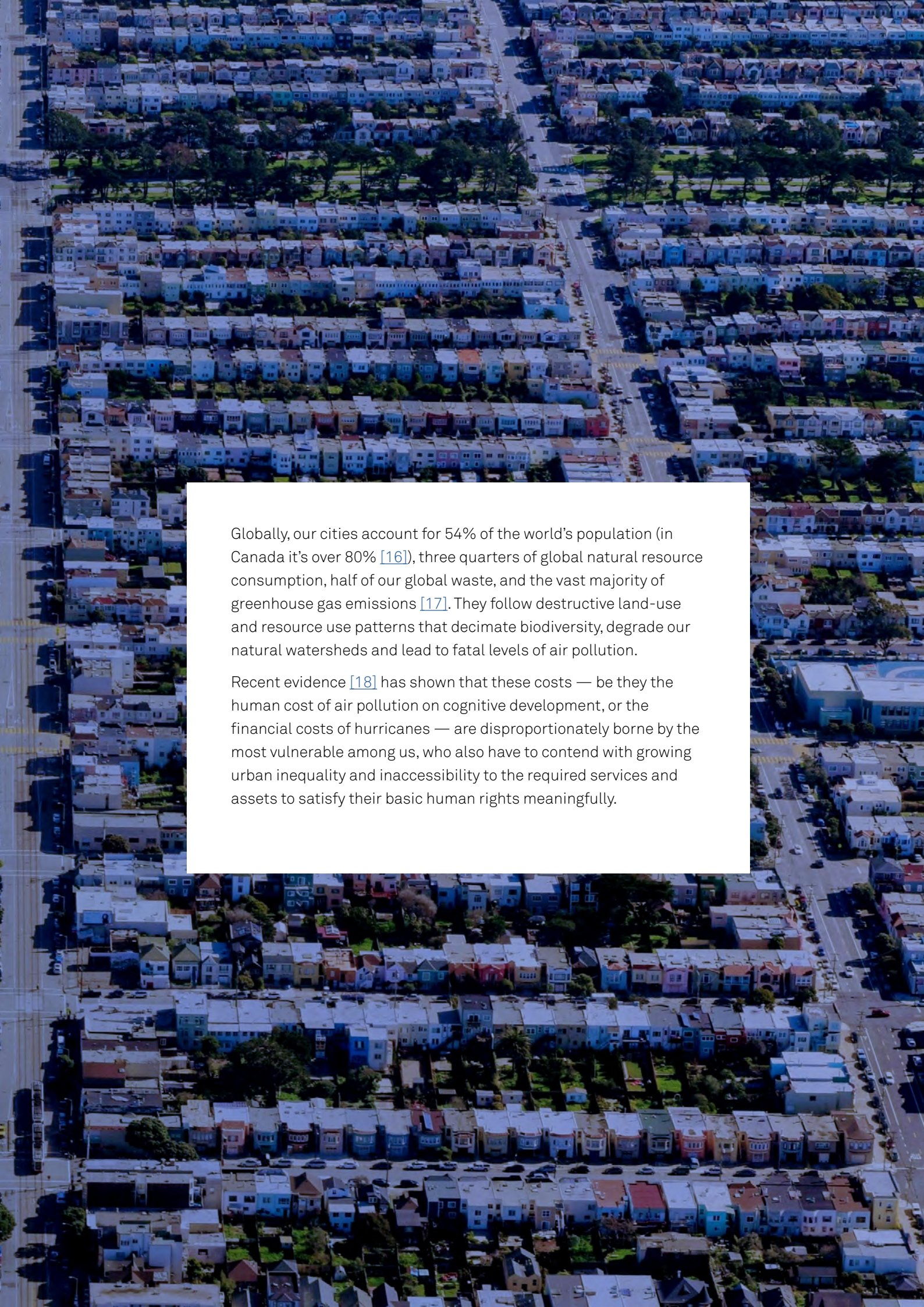
SOCIAL

Relationships, sense of belonging, trust.



01
A TIPPING POINT

OUR CITIES ARE FULL OF LATENT POTENTIAL



Globally, our cities account for 54% of the world's population (in Canada it's over 80% [16]), three quarters of global natural resource consumption, half of our global waste, and the vast majority of greenhouse gas emissions [17]. They follow destructive land-use and resource use patterns that decimate biodiversity, degrade our natural watersheds and lead to fatal levels of air pollution.

Recent evidence [18] has shown that these costs — be they the human cost of air pollution on cognitive development, or the financial costs of hurricanes — are disproportionately borne by the most vulnerable among us, who also have to contend with growing urban inequality and inaccessibility to the required services and assets to satisfy their basic human rights meaningfully.

(1) https://medium.com/canada-growth-summit/building-the-future-5acb9b9db014; (2) https://www.cbc.ca/news/business/canada-economist-liveability-1.4784524search?q=canada+most+liveable+city&oq=canada+most+liveable+&aqs=chrome.0.0j69i57j0l3.3815j0j7&sourceid=chrome&ie=UTF-8 https://medium.com/canada-growth-summit/building-the-future-5acb9b9db014; (3) http://www.tradecommissioner.gc.ca/innovators-innovateurs/strategies.aspx?lang=eng.; (4) https://www.oecd.org/canada/EAG2012%20-%20Country%20note%20-%20Canada.pdf; (5) https://www.nrcan.gc.ca/energy/renewable-electricity/7295; (6) https://cupe.ca/fair-taxes-and-municipal-revenues; (7) https://globalnews.ca/news/3795083/reserves-poverty-line-census/ ; (8) http://www.poandpo.com/news_business/financial-situation-greatest-stress-for-canadians-752018927/; (9) https://www.iisd.org/sites/default/files/publications/costs-of-pollution-in-canada.pdf; (10) http://www.vancouversun.com/health/pollution+nine+times+deadlier+than+crashes+researchers/9061897/story.html; (11) https://www.intelligencer.ca/news/canada/new-research-predicts-heat-waves-in-canada-could-become-more-frequent-and-five-times-more-deadly/wcm/837cc4cb-c19e-4d09-9724-4cfbadefe167; (12) https://www.bloomberg.com/news/articles/2018-06-06/toronto-makes-new-york-look-cheap; (13) https://issuu.com/undp/docs/policy_paper_-_strategies_for_buildarticle37437821/

A TALE OF TWO CANADAS

Canada is a country of contradictions, home to diverse regions and stark contrasts.

Canadian cities are regularly found among the top of lists for liveability and sustainability, as well as being home to leading civic innovators and change-makers. To keep it this way, the government is ready to invest $750 billion in cities as well as driving global leadership in the social finance sector through the Social Finance Fund.

At the same time, many of its citizens (especially Indigenous Peoples) are entrenched in lives of poverty and live in communities rife with environmental injustices and economic deprivation.

What's more, Canada is growing rapidly — with 11.2% population increase from 2006 to 2016. Therefore Canadian cities will increasingly have to deal with the seemingly intractable growth issues they already struggle with: greater transport pressures, new levels of waste and stress, growing levels of environmental degradation and increasing demands to build more affordable housing.

Yet we continue with a fiscal system that structurally under-funds our municipal governments (even when we all know the massive costs down the line of deferred maintenance) and a financial system that entrenches inequality — failing to provide even the most basic of human rights to our First Nations, forcing them into poverty traps they have little chance of ever escaping.

How did we get here? And where do we go from here?

HOW DID WE GET HERE?

Capital will be needed to drive a more democratic and human future; unfortunately, certain negative characteristics in how we currently raise and steer capital are getting in the way. Part of the challenge, we believe, is dealing with a system that tries to reduce a world of complexity to nominal values.

"It's value that's created, enjoyed, goods and services enjoyed within the community even in the workplace, but it's not monetized, which shows that the monetary slice of the economy is probably capturing a smaller and smaller fraction of the total value that we generate."

KATE RAWORTH [19]

SILOED

In the face of complexity, we have created silos — for example, we separate government welfare budgets into health and social care even though this choice inhibits policy-makers and practitioners from working together to solve the same problems. While silos and divisions of labour (as a fundamental principle of the market economy) have helped to drive efficiencies within a silo, they tend to cause a lack of capacity to adapt our practices through critical system-wide evaluation, often at the detriment of wider outcomes – particularly in times of change.

SHORT TERM

We exist in a world of 3 to 5 year investor and political cycles, making it almost impossible to unlock the longitudinal and intergenerational financing we need. This exacerbates a societal tendency to focus on the here and now that prioritizes an exorbitant repair job over a low-cost prevention strategy, whether we are talking about infrastructure or health.

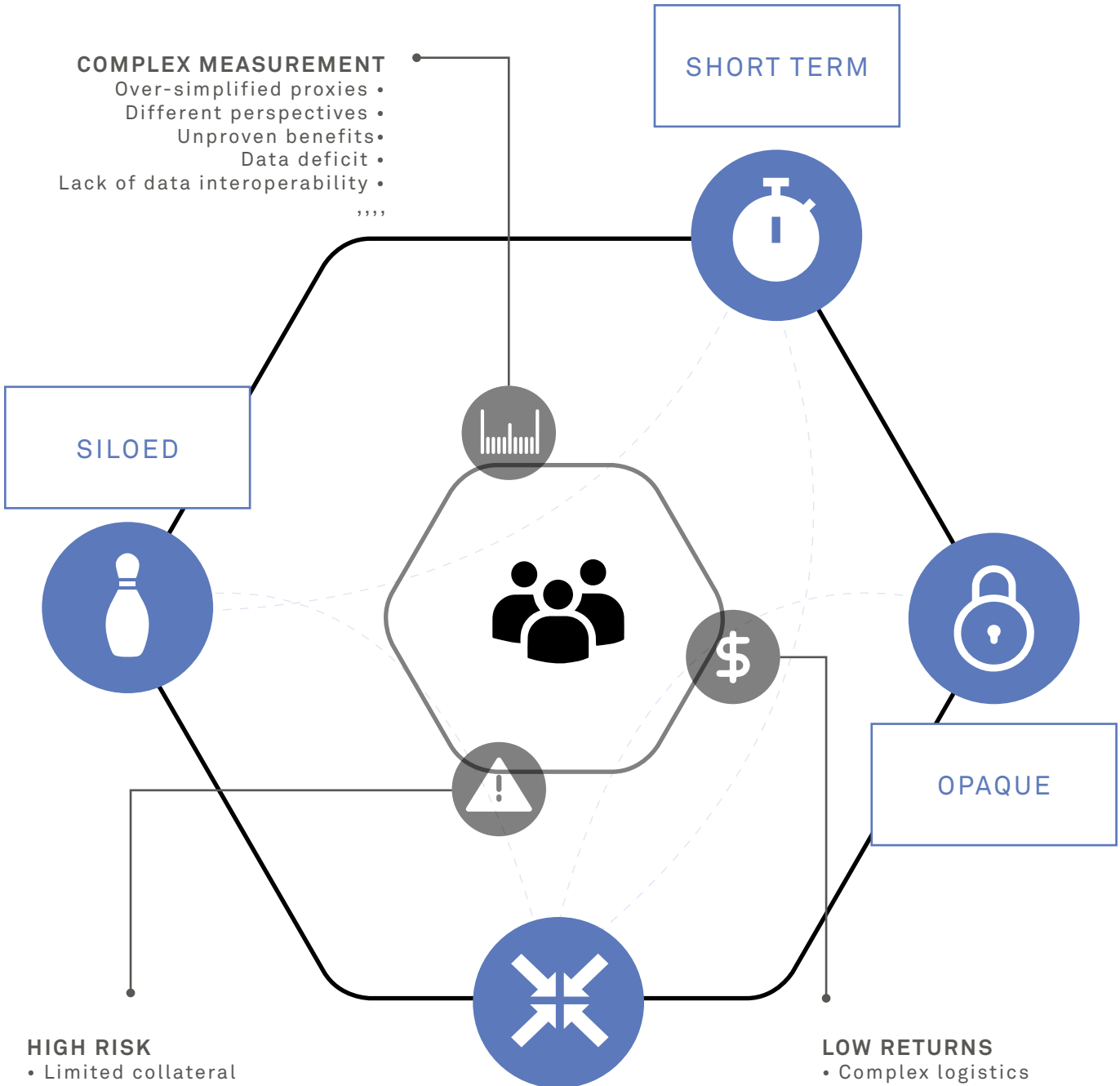
CENTRALISED

An overly centralised finance system has structurally excluded most people from investing in and profiting from valuable assets — entrenching inequality by privileging those who have already accumulated capital. For example, the wealthiest 20% of Canadians saw their wealth rise by 83%, while the bottom 20% saw a drop of 6% (between 1999-2012) [20]. When the richest three men own more than the poorest 50% globally, these unfair dynamics of inequality are harmful, especially when lobbying by private interests tends to triumph over our collective wellbeing when it comes to the allocation of capital.

OPAQUE

From tax havens to legacy systems that lack even the most basic of data interoperability and validity, we have a financial system which is run almost entirely opaquely – even in our world of open data, open source, open journalism and open documentation. People rarely understand the meaning of everyday financial products like personal liability insurance, let alone fiscal policies like quantitative easing - and it is unclear to most people how societies take systemic investment decisions whether large or small.

Many reports on impact-focussed capital innovation focus on challenges from the investor's point of view - whether it is the high transaction cost of bespoke new investment products, the high risk created by limited exit options, or the unclear metrics to determine impact. While these are important to bear in mind, we see a further four overarching negative characteristics, which we must tackle if we are to create better futures.



FINANCING IN A WORLD OF INTERDEPENDENCIES

FINANCING INFLUENCES THE CITIES WE CREATE

Capital, and the way it flows, is impacted by endless societal factors - and in turn it impacts them, often in invisible ways. This highlights that capital problems might have non-capital solutions.

A CASCADE OF NEGATIVE IMPACTS

EDGE OF ECONOMIC SYSTEM:

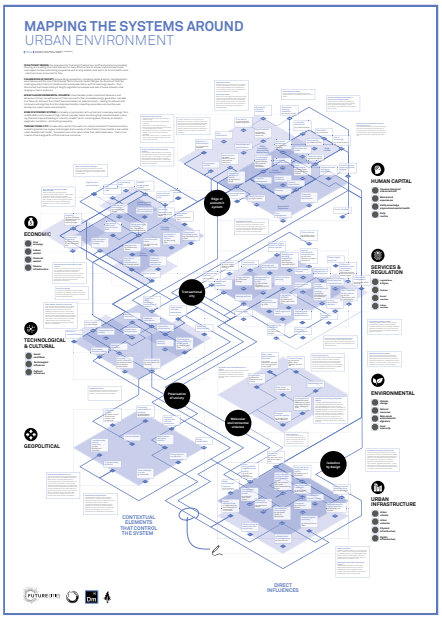
Our 'success of the successful' financing system, which privileges those who have already accumulated capital, is based on risk calculations and investment norms that makes those who have to pay in instalments (often the poorest) pay more — whether on unaffordable rents, pay-as-you go travel cards or high interest 'pay-day' loans. This puts up barriers to everyday savings, driving high household debt, reducing financial hope and entrenching a 'scarcity mindset' (which has been proven to bring down IQ levels), further accelerating inequalities and leading to....

POLARISATION OF SOCIETY:

Accelerating inequality (in combination with increasing socio-spatial economic segregation in our cities, social diversity, multiple governance failures e.g. tax havens, fake news or runaway technology) is driving societal polarization and leading to diminished levels of trust in institutions, which spills over into the world of science (e,g. climate change denial) and undermining the public legitimacy of stronger environmental policies, in turn leading to...

MOLECULAR ENVIRON-MENTAL VIOLENCE:

Unsustainable public investment decisions and behaviour choices, (e.g. the lack of renewable energy generation in urban centres or transitions in transportation), have led to a failure to disinvest from fossil fuels and reduce air pollution levels. This means we're witnessing illegal levels of air pollution, which in turn has long term knock-on effects life chances — disproportionately affecting vulnerable communities who already live in poor urban environments and further entrenching inequality.



This diagram maps the interdependencies of different factors across different stacks of a city

This diagram highlights some of the financial and economic risks that our cities face, bringing out headline and statistics to demonstrate their interdependencies.

Impact of national budget on health-care (and future budget)

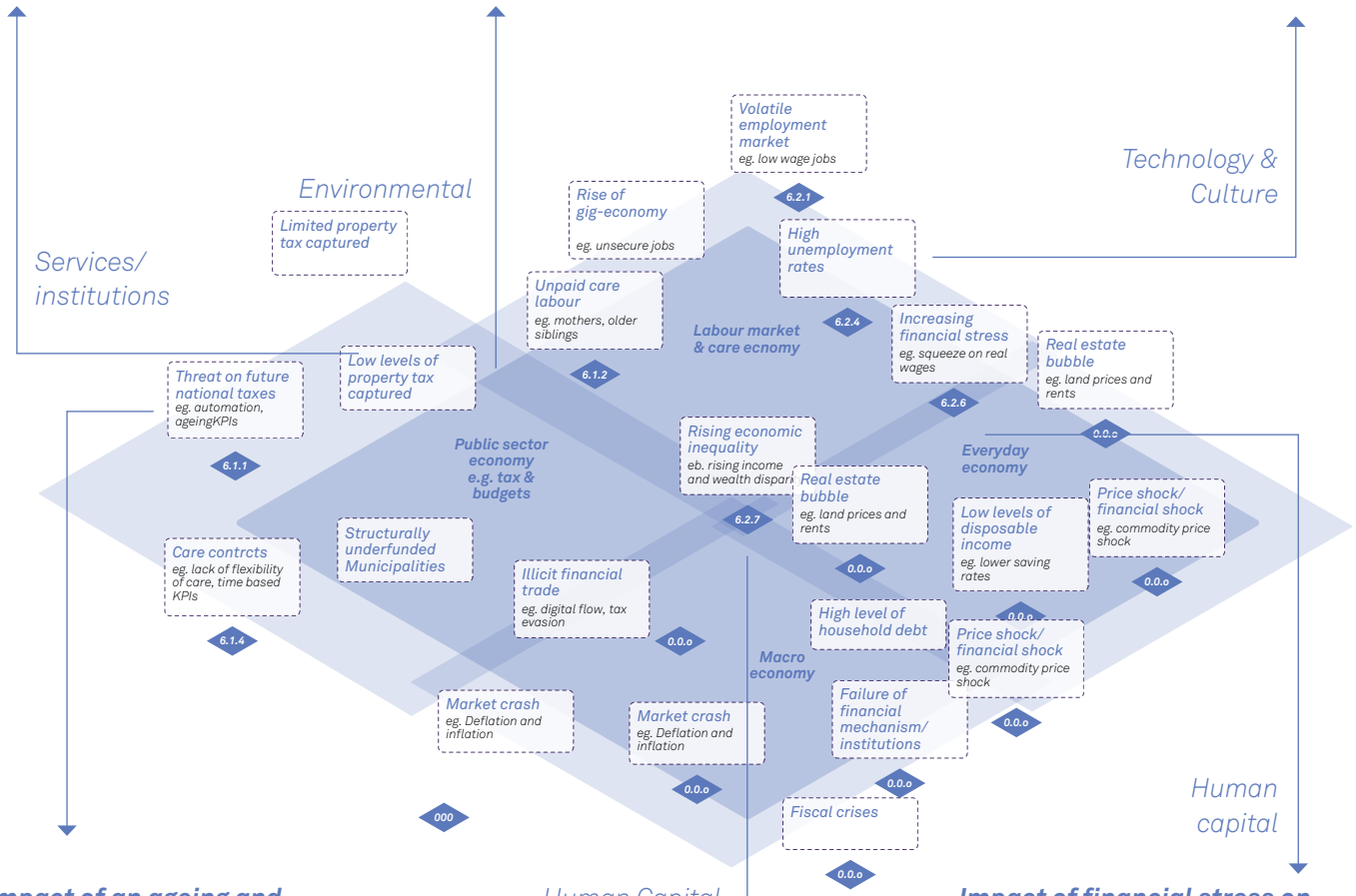
"Public health, which represents activities related to ...disease prevention, accounts for 5.5% of national health expenditures. [even when] chronic illnesses cost Canadians $68 billion in healthcare costs and $122 billion in productivity losses" **(1)**

Impact of ecosystem maintenance on municipal assets & liabilities

New York invested in their watershed at "a fraction of the cost of an engineered asset: restoration cost about $1-1.5 billion, whereas a filtration plant would have cost $6-8 billion and required $300-500 million/year to operate." **(2)**

Impacts of automation on labour market

"We estimate that between 400 million and 800 million individuals could be displaced by automation [by 2030]... Of the total displaced, 75 million to 375 million may need to switch occupational categories and learn new skills" **(3)**



Impact of an ageing and automated labour market on tax-base

"Automation allows firms to avoid wage taxes, which fund social benefit programmes such as Medicare, Medicaid, and Social Security in the US" **(4)**

Impact of urban environment, and fiscal policies on inequality

"More than 61 per cent of the rise in total household net assets since 2005 is related to real estate... Soaring house prices can explain a large part of the increasing wealth inequality as households from the lower quantiles are less likely to own real estate." **(5)**

Impact of financial stress on human capital

"This scarcity mindset consumes what Shafir calls "mental bandwidth" — brainpower that would otherwise go to less pressing concerns, planning ahead and problem-solving. This deprivation can lead to a life absorbed by preoccupations that impose ongoing cognitive deficits and reinforce self-defeating actions." **(6)**

(1) https://www.marsdd.com/news-and-insights/transforming-health-ontario-innovations-preventive-healthcare/; (2) http://waterbucket.ca/wp-content/uploads/2017/10/2016-%E2%80%93-Getting-the-Most-from-Infrastructure Assets-The-idea-of-ecological-accounting-Asset-Management-BC-Newsletter.pdf; (3) https://www.mckinsey.com/~/media/mckinsey/featured%20insights/future%20of%20organizations/what%20the%20future%20of%20work%20will%20mean%20for%20jobs%20skills%20and%20wages/mgi-jobs-lost-jobs-gained-report-december-6-2017.ashx; (4) https://theconversation.com/why-we-should-start-taxing-the-robots-that-are-taking-human-jobs-91295; (5) https://www.theglobeandmail.com/report-on-business/rob-commentary/the-high-cost-of-canadas-increasing-wealth-inequality/article37437821/; (6) https://issuu.com/undp/docs/policy_paper_-_strategies_for_buildarticle37437821/

02
CAPITALISING THE CIVIC

UNLOCKING INVESTMENT IN CIVIC ASSETS

While we increasingly appreciate the value of our civic assets – from the trees that mitigate flooding, to the relationships that help us in post-disaster recovery – we lack pathways to invest in them.

On the other hand, there are innovative mechanisms and models that can drive investment from a range of public, private and civic actors – from civic tech activists to traditional corporates.

These mechanisms have the potential to create a capital system that really makes the most of these assets. However they are not without their own negative, often unintended, consequences.

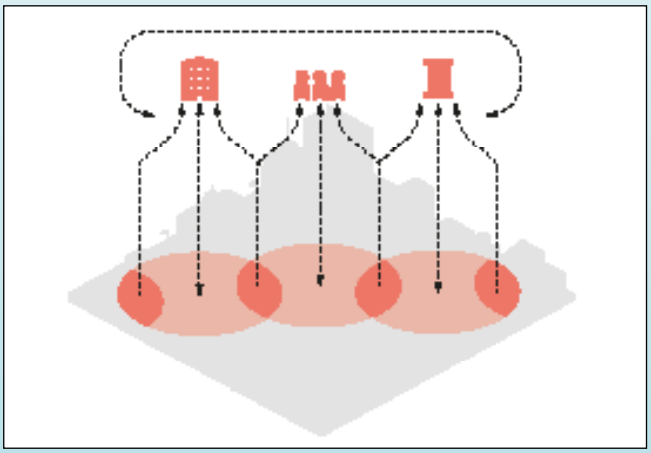
Our challenge is to make sure they are used in such a way that supports a more democratized, systematic, long-term and transparent financing system.

4 TRENDS

There are many nascent tools that aim to create a more equitable and sustainable financing system. Below we have grouped them into four key trends that are being driven by a range of disruptive technologies and behaviours, and which enable previously unimaginable business and investment models.

While desirable, they also bring with them their own unintended consequences. The challenge for our generation is to make sure they have the best chance possible of creating a better future.

01

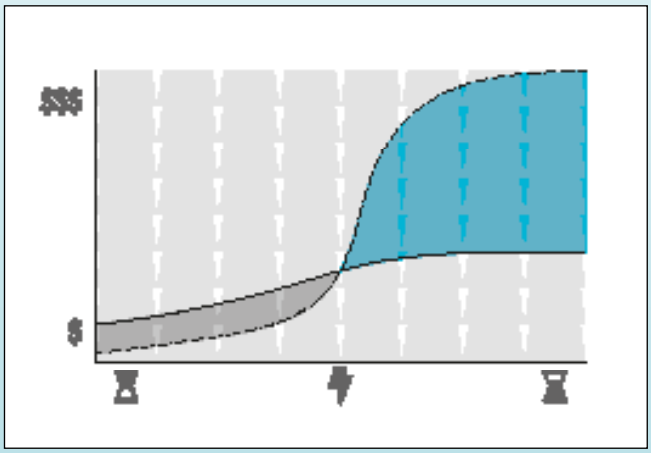


SYSTEM FINANCING

We must uncover hidden value, unlock synergies and capture spillover value.

System financing and systems-aware asset-management are the cornerstone to change. The case studies show innovation in how we raise and steer capital towards system-change, such as governance innovations that build shared foundations and incentives.

02

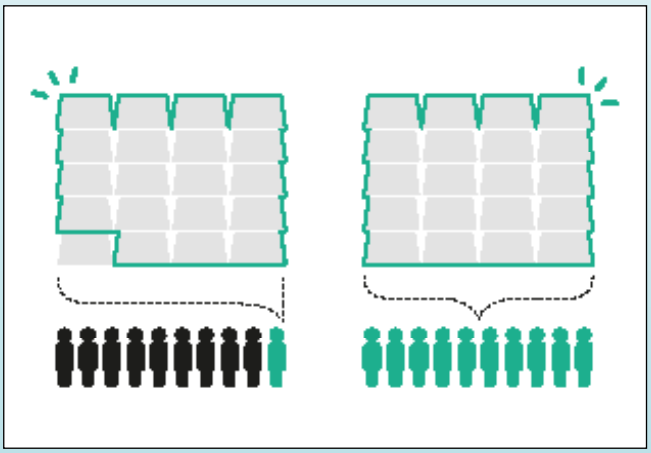


FUTURE-ORIENTED FINANCING

We must become intentional to our future

The case studies use a variety of mechanisms that unlock preventative spend, from harnessing technologies to predict (and avoid) risks to raising funds that aim to help us escape from our 'culture of the last 5 minutes'.

03

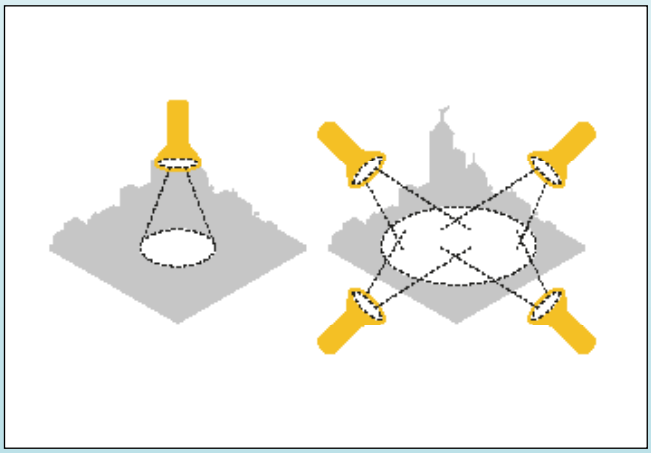


DEMOCRATIZED FINANCE

We must rebuild our financing for the benefit of the many.

The case studies demonstrated innovative ways to redistribute wealth and value-creation –with distributed ledger technology paving the way for zero-cost administration enabling the separation of assets into their constituent parts, thus unlocking inclusive new business models and participative approaches to investment.

04



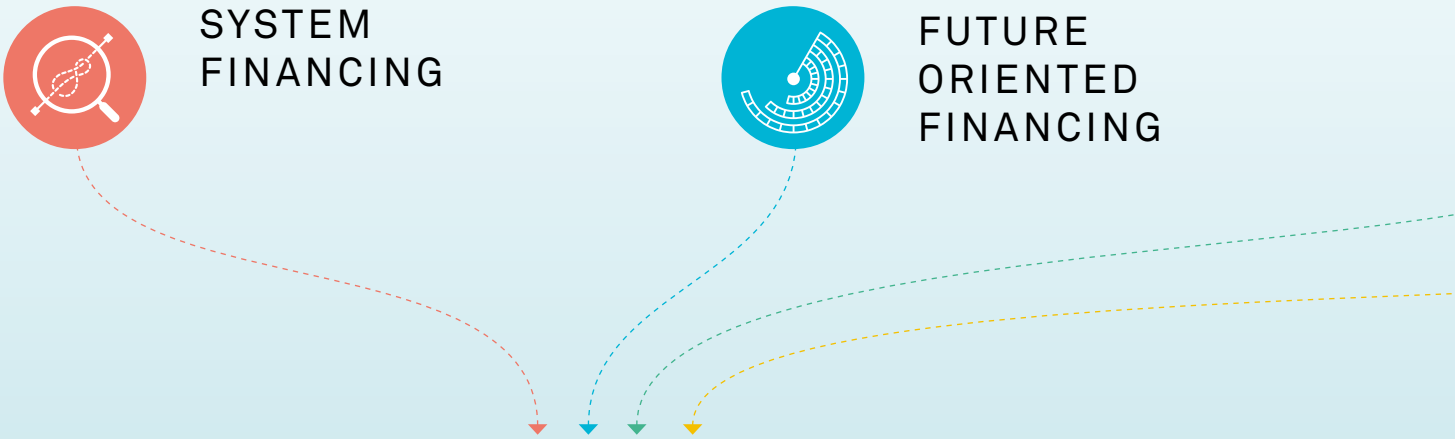
TRANSPARENT GOVERNANCE

We must be open and transparent in our actions and investments.

Transparency is the foundational prerequisite for creating the resilient, agile governance models able to cope with our system complexities, while stewarding our public good with integrity.

HOW DO WE BUILD CIVIC CAPITAL?

CURRENT TRENDS:



A 21ST CENTURY FINANCIAL SYSTEM

Long term
ACCOUNTING

Built on shared balance sheets across entire systems, which transparently convert shared threats into common liabilities. This allows us to account for future risks, like the macro threat of cognitive decline and link them directly to externalities like air pollution and nutrient decline - unlocking investment in shared risk-mitigation.

Fit-for-Purpose
TAXATION

Mechanisms that represent the way value flows through our complex systems; capturing spillover growth in private asset value derived from our collective investment in civic assets, thereby ensuring that our municipal, provincial and national governments are adequately resourced.

Civic Asset
MANAGEMENT

Innovation in the operating system and decision-making processes which allows for distributed power arrangements (such as participatory municipal budgeting or civic data trusts) that legitimize multiple actors as part of the preservation and enhancement of our civic assets.

DEMOCRATIZED FINANCE

TRANSPARENT GOVERNANCE

Outcomes
INVESTMENT

Approaches that go beyond financing single projects, by focusing on investing in portfolios that can deliver positive outcomes such as improved well-being, or better stewardship of our natural resources. This type of investment will need us to take oblique and indirect financing approaches that cross silos and create shared outcomes.

Democratising
PROCUREMENT

Ensure that we are deriving as much collective multiple benefit as possible from whatever we spend. Yet this type of procurement must be aligned across all scales, from municipal tenders to household purchases, using contract clauses, new types of partnerships, and new market incentives – democratising the choices behind our procurement models.

21st Century
INSURANCE

Products that utilize the multiple technologies that have changed the way we can measure and manage risk (IoT, big data etc.) to monetize our ability to avoid catastrophic risk. Future insurance models will align the often diffuse benefits of different stakeholders to avoid shared risks.

SYSTEM FINANCING

Financing systems change requires us to raise and steer capital in a systematic way – what we call *system financing*. Where our current system focuses on short term return on multiple investments, this approach attempts to steer capital by linking investment in interventions that share common purpose. This allows us to leverage what is already being spent, and create spillover value throughout the system. Doing this relies on uncovering hidden assets, creating synergies and encouraging value-capture mechanisms.

Systems change *describes an approach that recognises the need to engage with the whole system as a series of interdependent nodes, instead of attempting to move small parts of the system individually.*

UNCOVERING HIDDEN ASSETS

Our cities are abundant, brimming with latent potential and hidden assets; from vacant land and natural assets, to dormant bank accounts and under-used belongings. Coupled with our ever growing data-rich infrastructure, we have the possibility to re-appreciate these assets (whether private or civic) in a drive towards a more circular economy, with reduced waste and increased asset utilisation. While these often seem obviously beneficial, strategies often tend to require complex stakeholder alignment and shared administrative foundations.

Data rich infrastructure *- e.g. Asset tagging of car parts to monitor usage and extend life such as Samsung's protocol to enable a washing machine to autonomously negotiate energy use; connected asset platforms such as Airbnb; linked payment methods on public transport etc.*

The Circular Economy *isn't just about reusing and recycling physical goods, it also requires circular risk analysis and financing tools, that track (and predict) the performance of our shared infrastructure - from design all the way to life long maintenance.*

CROSSING SILOS & CREATING SYNERGIES

In order to make the most of the way capital is directed, we need to encourage approaches that leverage what is already being spent, either through grants, equity, debt investment or procurement. In these strategies, different stakeholders work together to collaboratively direct capital towards linked projects (e.g. nutrition classes for new parents and after school clubs for children as part of a holistic early years and family support approach), or actors (e.g. small enterprises that encourage local economic multipliers). This approach can generate aggregative value that is more than the sum of its parts.

Private-Public-Partnerships *are an approach to procuring public infrastructure where the private sector assumes a major share of the responsibility in terms of risk and financing for the delivery of the infrastructure.*

Value capture *is a type of public financing; however we use it broadly to mean approaches which help to re-direct future value*

CAPTURING VALUE

Value capture is not new - contractual mechanisms have been in place since medieval England (#S.14). What is new is our ability to rapidly understand, and prove, how value flows. For example, with data rich infrastructure and digitised land registries, we can monitor in real-time how public investment changes property prices.

From distributed ledgers to greater data interoperability, technology is allowing us to see how value flows through a system. We are seeing a host of innovative ways in which the standard tools of financing are being disrupted including new management strategies that unlock hidden value, cross-silo investment portfolios and procurement strategies.

MANAGEMENT

Publicly owned assets, whether land or environmental (such as trees or oil deposits) are often not capitalised. Across different sectors, governments are testing new approaches that see publicly-owned but privately managed entities set up to enable efficient management and ensure stewardship of these resources – such as urban land used as collateral for loans in Copenhagen (#S.04) or an arms length organisation for controlling logging licenses in Armenia (#S.01). However, novel approaches unfortunately come with their own negative consequences – such as land-based loans inflating land values (#S.04)

This is part of a wider trend towards public-private-partnership which enable the sharing of costs (and rewards) by changing the roles of those involved. Increasingly used in public procurement, they can have the benefit of creating longer-term business models, for example delivering municipal lighting as a service (rather than a product) incentivises energy efficiency (#S.08).

TAX

Using taxes to capture spillover real-estate gains from public purse spending has existed since the 15th century, with Henry VIII using it to finance flood defences. However with increased understanding of the direct property value increase, there is growing attention to these taxes. Creating these policies involve a range of questions such as: who should be taxed?' Properties (#S.15) or businesses (#S.09)? Where should be taxed? An area (#S.15) or the city (#S.09)? When should the tax be levied ? A one-off negotiated exaction or on future property transfers (#S.15)?

ACCOUNTING

To unlock civic assets we need to consider what we currently count as being valuable, and how the way we record it influences our decisions. While we increasingly re-appreciate civic assets, in order to drive change (e.g. raise property taxes to invest in them) case studies demonstrated changes in municipal accounting e.g. Gibsons (#F.02)

INVESTMENT

In order to drive impact, investors are testing more holistic approaches. This includes: well-known collective impact models (#S.18) that aim to break the cycle of intergenerational poverty through linked interventions (e.g. parent training, pre-school nutrition, and educational support); Manchester pension schemes that invest in the places where their funds come from (#S.16) and foundations acting simultaneously as grant givers, impact investors, shareholder activists and movement-builders (#S.21)

PROCUREMENT

At both the household, business and municipal level, 'hacking' how we procure goods and services can help set up (and scale) inclusive growth patterns. Public approaches include anchor institutions collaborating to purchase locally (#S.05), community-development procurement (#T.25), outcomes procurement with multi-departmental funds (#S.25), and 'better learning' procurement with evidence-generating funds (#S.13). Examples of private purchasing power include Sardex (# D.08), when faced with limited cash flow due to the financial crisis, businesses in Sardinia set up as a mutual credit system for exchange. Wild Hearts Charity (# D.10) which supplies some of UK's largest companies with stationary, invests profit in micro-loans.

FUTURE-ORIENTED FINANCING

Future-oriented financing is about overcoming 'the culture of the last 5 minutes', to encourage collective investment in long term risk mitigation strategies that require complex stakeholder arrangements in the face of diffused existential threat.

Crystallisation *means to convert from floating risks into fixed costs*

CRYSTALLISATION OF SYSTEM FUTURE RISKS

While individually we buy life insurance, the diffuse benefits of our multi-variable, multi-actor systems too often stand in the way of us spending now to avoid losses later. Therefore, even though we are facing an unprecedented scale of challenges from climate change to social inequality, we too often transfer or accept these risks.

Thankfully, we are witnessing a rise of mechanisms that better align incentives in order to pursue the risk-management strategies that climate change and other wicked issues demand.

Examples include legislative changes that help to institutionalize new understanding of accountability - both for private actors as evidenced through the rise of global credits and EU's Extended Producer Responsibility (EPR) Directive [21] and for public actors such as Norway's decisions to 'commit to a deforestation-free supply chain of goods coming into the country' [22].

EPR *for packaging extends the producer's responsibility for a product to even after the product has been used by consumers*

But not all do. With some being driven by civically minded individuals in public and private organisations who are innovating approaches. These are often the lower hanging fruits, from innovative insurance products to new procurement strategies like Social Impact Bonds which face up to the real scale of societal and environmental costs we are giving to our future generations.

Social Impact Bonds *is a type of PPP contract between a provider of services and the public sector in which a commitment is made to pay for improved social outcomes that result in public sector savings.*

Numerous nascent mechanisms are helping to convert existential systematic threats into quantifiable costs that we can invest preventative against.

ACCOUNTING

We can trace modern accounting back to Luca Pacioli's 1492 treatise on book-keeping [23]; where keeping a good record of one's inventory allowed merchants to evaluate how they were doing and avoid risks such as theft by employees. Our 21st century technology, from connected sensors to advanced modelling, is allowing us to take a more complex, realistic inventory of not only our current assets and liabilities – but our future ones as well (for example the risks posed by degraded natural assets). There is a growing interest in quantifying financial value of common good resources such as potable water in Gibsons (#F.02), which aim to provide the evidence-base for the benefits we derive and pave the way to steering capital to their preservation.

INSURANCE

Since the invention of private property insurance after the Great Fire of London (#F.01) the insurance industry has long helped to create mechanisms for first transferring risks and then mitigating them. Our 21st century risks – like sea level rises and automation – can not be mitigated through single actor command and control models. Case studies are showing first glimpses of what a fit-for-purpose insurance model would look like – where private and municipal government join together to provide 'resilience bonds' (#F.03) that use today's insurance premiums to finance strategies that reduce tomorrow's risks (and insurance premiums).

PRICING

Shifts in the way we price things are helping to drive future-oriented behaviours. This process of financializing externalities, whether by charging private companies like Danone (#F.16), lower interest rates, to the rise of the carbon offsetting market or the creation of the first stormwater credit system in Washington (#F.05) helps to shift the discourse around who is responsible (and therefore who should bear the burden).

However, pricing changes require transparency and capacity building to be successful – as demonstrated by Denmark's failed sin taxes [24].

INVESTMENT

Long-term investment is being unlocked by overcoming the risk barriers such as lack of exit options (for more detail see page 19). Many financial mechanisms are finding innovative ways to de-risk these, for example by gaining liquidity from green securitization or facilities that bundles projects. However, it is unclear whether we can always rely on market responses – with a drop of investment in climate change mitigation from $437 billion in 2015 to £383 billion in 2016, [25]

PROCUREMENT

Outcomes-based financing initiatives like Social Impact Bonds (#F.07) and Environmental Impact Bonds (#F.05) , are helping governments and private actors to share risk (unlocking risky private capital today), encouraging evidence-based policy decisions and - importantly - allowing for long-term bipartisan programmes which exist outside of political cycles (due to the contractual obligation with the service provider and private financier).

DEMOCRATIZED FINANCE

Democratic financing is about growing our collective ownership models and our capacity for individual value creation - fighting against a system where 50% of Canadians don't have enough savings to last them 3 months [1]. For us to overcome the centralising, and discriminating impacts of our current financial system we need to reinvent our existing ways of raising and steering capital and capturing value, by increasing inclusion in the financing of our society.

MAKING THE SYSTEM MORE PARTICIPATORY

The majority of financial innovation is focused on making the existing systems of borrowing, saving and investing more participatory, often focused on widening access to equity or debt capital. For example helping disadvantaged communities access loans through legislative change (#S.02) as well as services like insurance, enabling people to get insurance for $10 premiums through peer-to-peer insurance (#T.07).

Front-end *services are focused on the interface, those where users interact with the system e.g. the automation of bank-tellers and wealth advisors*

The other side of the relationship - the provision of capital - is also becoming more distributed. For example, technology is unleashing a new scale of asset fractionalisation - for both the insurer and insuree above - overcoming barriers to entry, and opening investment opportunities to a much wider group. Much technology is focused on the front-end, eg. Abundance Investment, and while it widens access through automation (e.g. with robo-advisor chat bots) it will not be sufficient to drive inclusive growth.

Asset fractionalisation *means the separation of assets into n their constituent parts, allowing for asset-backed tokens, opening new markets and reducing the barriers to investment*

MAKING THE SYSTEM MORE DISTRIBUTED

The re-design of money
Many argue money needs a rethink, reimagining who can create it, what it can be used for etc.

There is another rise in 'alternative economy' models that aim to radically change the financial system - often through redesigning of money - for example, just like time-banks, alternative currencies that create new ways to convert value and steer capital have been around for close to a century (#D.15). We are witnessing a renewed interest in them, with the rise of crypto-currencies and asset-backed tokens. While full of potentially negative consequences, from environmental costs [26] to high levels of money laundering [27], the technologies that underpin innovations like Bitcoin could pave the way for more distributed credit, payment and exchange systems. The case studies highlighted how these immutable ledgers and network structures can transfer the power of strong networks away from technological monopolies, and towards civic organisations.

Time-banks *are reciprocity-based work trading system in which hours are the currency.*

Cryptocurrencies *digital currency in which encryption is used to regulate the generation of units and verify the transfer of funds, operates independently of a central bank.*

Disruptive technologies, like immutable ledger technology and instant communication, along with the rapid decrease of computational processing cost, are opening up new opportunities to challenge the 'winner takes all' dynamics with which we currently operate.

INSURANCE

New technologies are allowing for new ways of sharing risks such as through distributed peer-to-peer insurance globally (#T.07) or insurance products which enable co-ownership of small assets, like cars, to unlock the sharing economy in Canada (#D.13)

INVESTMENT

To democratize access to capital, a range of different mechanisms and models exist to reduce risk and costs.

To democratize access to investment opportunities, technological advances are enabling things like peer-to-peer lending and crowd-lending. Examples include well-known platforms like Kickstarter or web-based renewable investment platforms like CoPower in Canada (#D.19), renewable energy co-operatives (#D.06), co-operative hedge funds that use algorithmic trading (#D.22) and neighbourhood shares (#D.05) - with many choosing a co-operative governance structure to democratize decision making.

1. Credit-Enhancement

A major barrier to leveraging private capital to invest in under-served communities are the credit rating of the beneficiaries. For example. to enable house building case studies include examples of 18th century Building Societies that used their houses for collateral (#D.07) to philanthropic funds being used today for Indigenous housing.

2. Equity & Co-operatives

Civic actors and makers have created collective value through co-operative structures since the forming of the Fenwick Weavers' Society in 1769 [28]; now new transparent technologies which stream-line co-ordination are allowing for new forms of neighbourhood shares in Leeds (UK) (#D.05), co-operative renewable energy market-places (#D.19), co-operative data funds to monetise personal data (#D.21), a block-chain based real-estate co-operative investment fund (#D.03) to international social media platform (#D.18) where owners 'work-in' the system (swapping their time for ownership) rather than 'buy-in'.

3. Debt

Innovation exists in both borrowing and lending. In order to widen access to loans, strategies include banking regulation and reform to encourage lending to undeserved communities (#S.02) and civic initiatives that see new credit partnerships formed. The latter has its routes in 18th century Birmingham (#D.07), where individuals who could not access financing for house building formed mutually owned credit-unions* which would finance each individual house, and then use the homes as collateral. More recent examples of circumnavigating financial institutions include (#D.08) where small businesses got together to issue money as credit to each other. In terms of lending, new technologies are allowing for almost-zero administrative cost reducing the threshold to entry as in Berkeley's block-chain municipal mini-bonds (#D.04)

***** *although recent credit-union bankruptcies highlight the need to adapt these models for our 21st century.*

TRANSPARENT GOVERNANCE

There is a growing need for greater transparency and adaptive governance models within the financial sector. Coupled with new technology, we now have the preconditions to unlock a series of next generation financial governance models - both in terms of monitoring and influencing public, private and civic stakeholders.

PUBLIC GOVERNANCE

As we move to an increasingly transparent world, public decisions regarding capital (e.g. taxation, procurement and budgeting) must be both made available for monitoring and increasingly open for participation. The need for transparency with citizens is evident from the discussion of sin taxes (page 31) as well as with other governmental departments to overcome silos - with national governments like Singapore growing their capacity to share information with initiatives like APEX (#T.10). In addition to these new open protocols, we are witnessing a rise of co-creation, from participation in municipal budgeting (#T.01) to direct involvement of citizens in fiscal policy decisions such as Taiwan's PO Network [29].

PRIVATE GOVERNANCE

The private sector (both corporations and financial institutions) have a huge role in delivering the cities we want, with increasing expectations for socially responsible corporations. Shifts in financial governance models include:

NORMS: Consumers using purchasing power to increase responsible businesses is not new; certification organisations like Fairtrade or socially responsible banks like Triodos (# T.12) are well established. However corporate responsibility and values-based banking is happening at an unprecedented scale, with initiatives like Aviva's World-benchmarking alliance [30] and GABV [31]

Global Alliance for Banking on Values (GABV) *is an independent network of financial institutions using finance to deliver sustainable economic, social and environmental development.*

World-benchmarking Alliance *measures companies' performance as a 'driver for change' in particular reference to the Sustainable Development Goals*

REGULATION: To accelerate the trend to voluntary social and environmental missions, governments are legislating for change. From finance, examples include France's regulation for institutional investors to consider the ESG record of companies (#T.02); to make corporate responsibility easier, the US has legislated for new types of for-profit companies that widen their fiduciary duty (#T.05).

ESG *Environmental-Social-Governance*

TECHNOLOGY: Essential to this is providing the shared technological infrastructure to enable transparent, trust-worthy places for exchange of both sustainable financial products (#T.04) or high-quality carbon credits as in (#T.15).

Global case studies are demonstrating how open principles are actively creating new forms of civic participation in our cities and companies - fundamental to reducing our alienation from the way our society is financed and (re)growing a collective sense of ownership over our neighbourhoods and cities.

INVESTMENT

PUBLIC: With falling levels of trust in public institutions, public actors are looking for new ways to make capital decisions more participative and bring legitimacy to their policies, growing our sense of shared ownership of our cities. Municipalities are innovating - from the Greater London Authority's decision to use municipal funding to match fund civic crowd-funded projects through an open platform (#D.25) to Paris' participatory budgeting (#T.01) - which uses digital technology to reach an unprecedented scale of participation and budget.

PRIVATE: The role of shareholders, and their re-appreciation for these civic assets is driving a range of new forms of 'shareholder activism'. ' From institutional investors like Blackrock changing their transparency commitments (#F.23) but there are also bottom-up approaches to pool shares in order to drive change through open platforms like Capitalusm (#T.03). This means that there is an increasing capacity to advance more inclusive, equitable and environmentally minded investment patterns - as evidenced by the explosion of a impact investing (growing at 18% a year from 2013-2015) and green bonds. [32]

While there are criticisms of the validity of some of these investment options, with the need to drive liquidity meaning the domain is far from homogeneous, there are exciting new governance models such as the Buen Vivir fund (#T.06) loan and grant capital fund where both investors and investees go through the same 'fund application process'..

PROCUREMENT

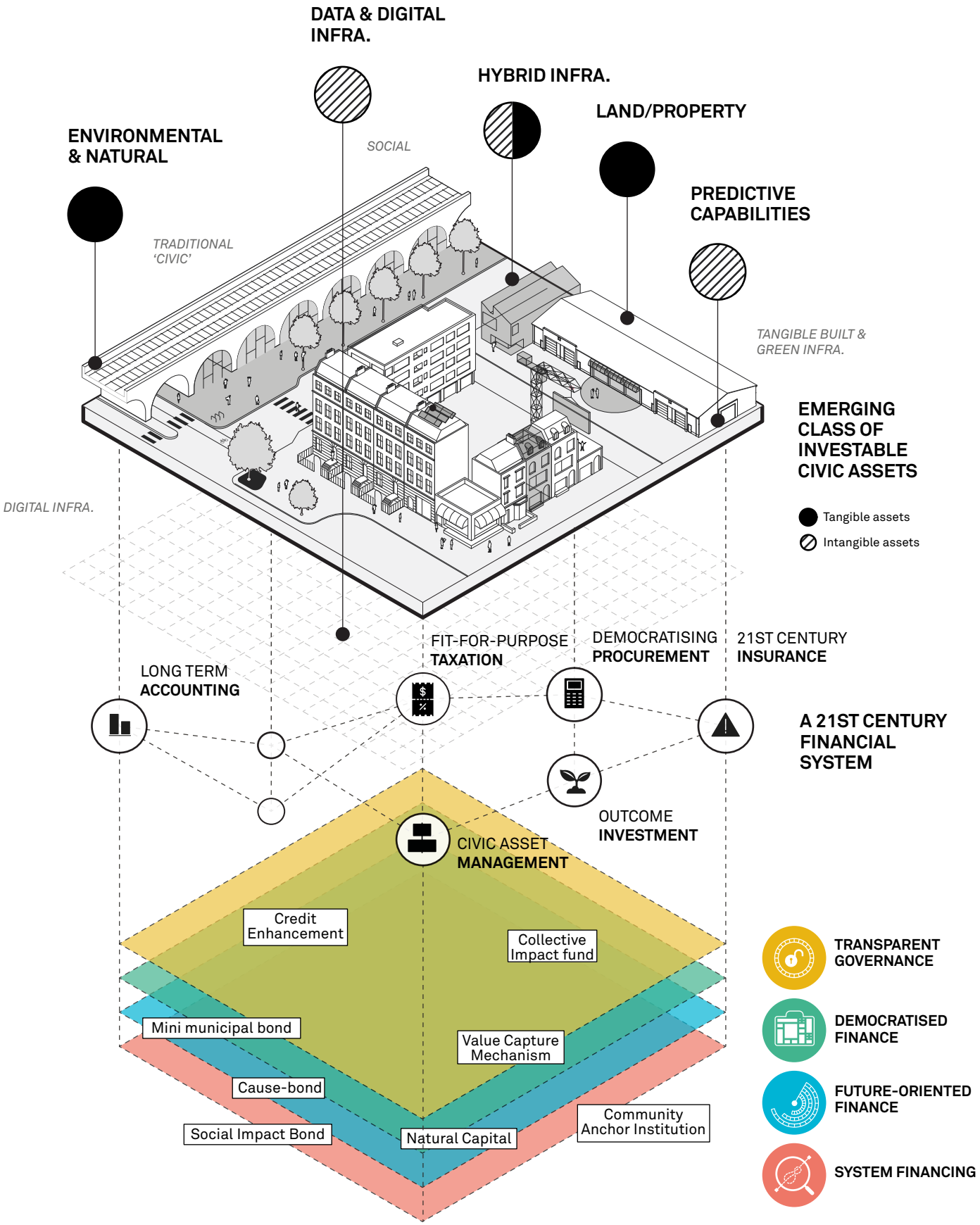
Digital infrastructure, and the increasing interest in open data and documentation, has the potential to revolutionize procurement.

PUBLIC: Innovations include reducing the administrative cost of real civic participation in infrastructure delivery such as in the rise of CBP3 (#T.25) and driving new levels of openness in monitoring with Ukraine's Pro-Zorro which opens public procurement to civic oversight (#T.16).

PRIVATE: For the private sector, many of the procurement revolutions are built on the block-chain, unleashing new standards for provenance and due diligence checking - from new Business-to-Business and Business-to-Consumer market places such as (#D.14) which encourages participants to do spot-checks and crowd-sources due diligence to new supply-chain management products that use meta-data to tackle corruption.

INSURANCE

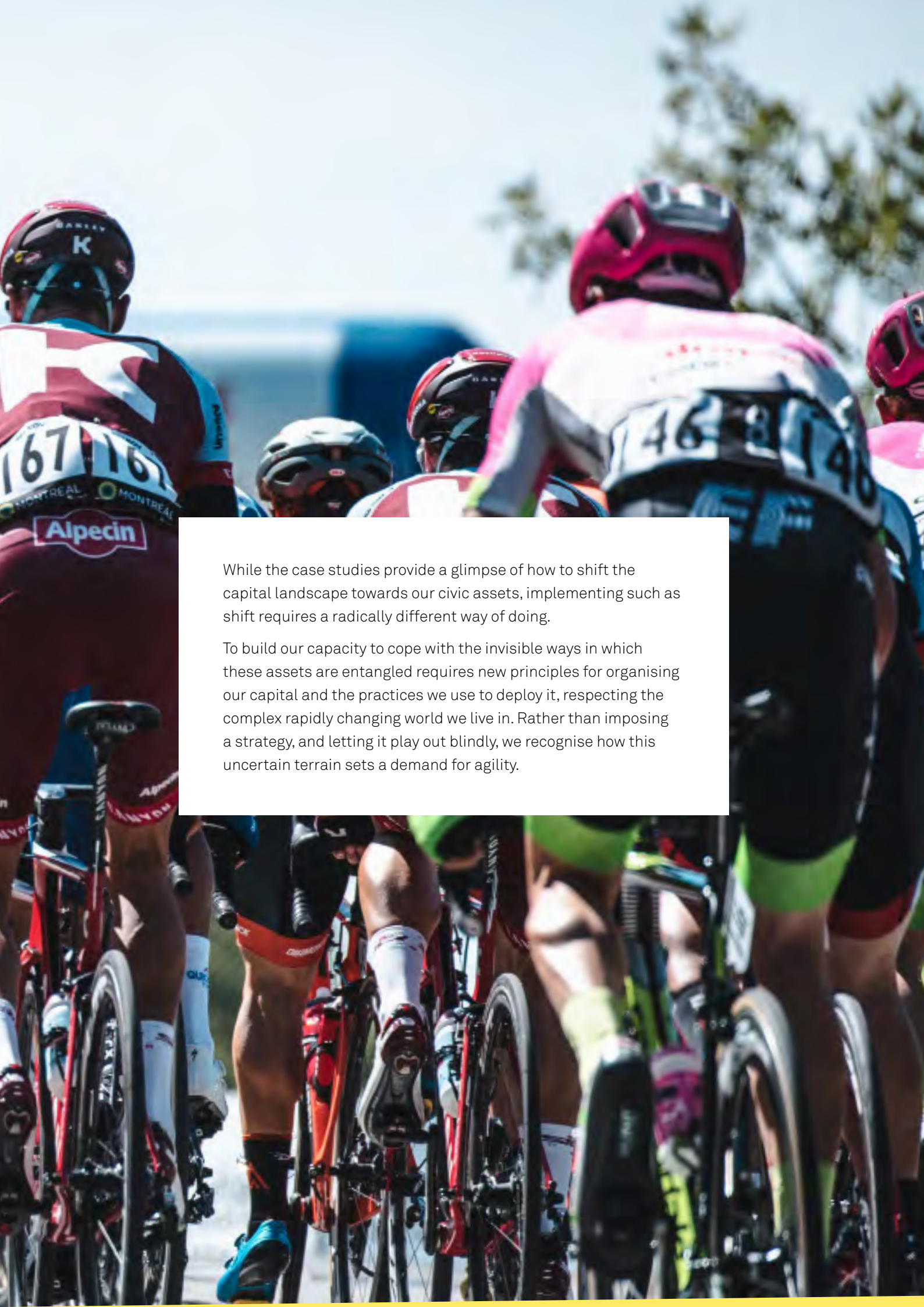
The private sector is growing its capacity to collectively and transparently make decisions, with the rise of open data, open source protocols such as the Oasis open-source modelling platforms (#T.08) . This is giving way to a host of new insurance products that are enabling things like co-ownership of small assets, like cars, in turn unlocking a greater capacity for the sharing economy (#D.18).


DATA & DIGITAL INFRA.
HYBRID INFRA.
LAND/PROPERTY
ENVIRONMENTAL & NATURAL
SOCIAL
PREDICTIVE CAPABILITIES
TRADITIONAL 'CIVIC'
TANGIBLE BUILT & GREEN INFRA.
EMERGING CLASS OF INVESTABLE CIVIC ASSETS
Tangible assets
Intangible assets
DIGITAL INFRA.
FIT-FOR-PURPOSE TAXATION
DEMOCRATISING PROCUREMENT
21ST CENTURY INSURANCE
LONG TERM ACCOUNTING
A 21ST CENTURY FINANCIAL SYSTEM
OUTCOME INVESTMENT
CIVIC ASSET MANAGEMENT
Credit Enhancement
Collective Impact fund
Mini municipal bond
Value Capture Mechanism
Cause-bond
Social Impact Bond
Natural Capital
Community Anchor Institution
TRANSPARENT GOVERNANCE
DEMOCRATISED FINANCE
FUTURE-ORIENTED FINANCE
SYSTEM FINANCING


315e PLAZA ITALIA
PASO PEATONAL EN DOS TIEMPOS

03
BUILDING OUR CAPACITY

THE WAY FORWARD



While the case studies provide a glimpse of how to shift the capital landscape towards our civic assets, implementing such as shift requires a radically different way of doing.

To build our capacity to cope with the invisible ways in which these assets are entangled requires new principles for organising our capital and the practices we use to deploy it, respecting the complex rapidly changing world we live in. Rather than imposing a strategy, and letting it play out blindly, we recognise how this uncertain terrain sets a demand for agility.

KEY TAKEAWAYS

0) THERE ARE MANY PATHS TO SCALE

Considering the variety of mechanisms surveyed, and outcomes achieved, the pathways to scaling up civic capital are many – from unlocking the trillions of capital in pension funds through approaches like in Manchester #S. 16 to unlocking the trillions stored as land-value through using land as collateral in Copenhagen #S.04.

1) START WITH WHAT'S THERE

With a deficit mindset, we often focus on the capital shortfall rather than the potential unlocked value. However, case studies helped to highlight the importance of starting from what's there, for instance using social capital in Sardinia #D.08 to overcome capital shortfalls by allowing small enterprises to provide credit to each other. At the same time, the best local 'asset-based' approaches still have to be linked to stronger capital provision in meaningful ways - otherwise they fall in a trap of only pushing back into communities the responsibility of stewarding those assets.

2) BUILD THE POLITICS OF CHANGE

A lack of civic legitimacy and political will forms a major barrier to driving lasting change. Case studies show several routes to overcoming this: a referendum on tax hikes in Gibsons #F.02; awareness raising and visual communications such as in Hoe Street, London (UK) #D.01 and the Million Dollar Blocks project, Chicago (USA) #F.06; coherently communicated missions to improve child outcomes in Harlem #S.18, exiting Nuclear Power in Germany #S.10, and going plastic free in Penzance (UK)#S.20. What all these strategies have in common is their practice of getting numerous actors to bring together their diverse energies and change public discourse.

3) THE POTENTIAL OF KNOWLEDGE-TRANSFER

Due to our tendency to create operational and domain-based silos, we often miss out on simple approaches that are commonplace in other sectors. Great case studies that demonstrate this are the New York's Transit Authority (MTA's) #F.22 which took a tool (catastrophe bonds) from the re-insurance market; or the creation of a health start-up accelerator in a competitive community health programme 'Way to Wellville' #S.23.

4) OPEN PRINCIPLES OF DOING

To tackle the complexity of our world, many case studies demonstrated that open, collaborative ways of doing are necessary in order to source different view-points and give bold new approaches to change the best chance of scaling, such as Oasis's open-source modelling platform #T.08.

A lab should...

Build on what's happening already

Learn from what's there, through an open process that have lived experience of the challenges at hand

Convene various stakeholder - governments, start-ups, civil society organisations etc.

Find ways to communicate the information to those varied stakeholders

Build a conversation, and a coherent way of discussing the topics

Iterate, test and prototype solutions

Enable the flow of knowledge, techniques and data across sectors

THE WAY FORWARD

HOW DO WE FINANCE THE FUTURE BASED ON LONG-TERM THINKING?

HOW DO WE FINANCE SYSTEMS AND DERIVE MULTI-ORDER BENEFITS?

HOW CAN WE FINANCE MORE DEMOCRATICALLY?

HOW CAN WE FINANCE MORE TRANSPARENTLY?

We recognise that the challenge of innovating how we deploy capital towards our shared goods is critical. We also recognise that answering these questions is a systems issue itself –requiring innovation across the full stack –from regulation to technology). We also recognise the experimentation, in an age of uncertainty, is a critical step towards innovation as they create the proof-cases as well as help to systematically test our assumptions in real world contexts.

The Civic Capital Lab will therefore take an experimental approach, following an adaptive strategy through 90 day reflective sprints that break down paralysing complexity to small actionable tasks – which we commit to transparently, and reflect on critically on the 89th day. We (as the Lab) will commit to open principles and also use continuous social feedback mechanisms where we share our thinking and practice through open blogs that we invite everyone to comment on. Our work strands will be centred around:

(1) Four research commissions to build our collective experimental capacity and intelligence. Each commission will address one of the four questions, investigating and investing across the full stack (from regulation and accounting metrics to culture and social norms) through a process of open enquiry and hack-labs to prototype experiments.

(2) Six City Accelerator programmes to create the proof cases through tangible processes of integrating these approaches in live testing sites. Cities will enter a competitive process to be part of the accelerator, which will be a three week process, with the last day a 'demo day' of an initial business case for a series of investments into that cities great transition.

(3) A learning infrastructure to enable diffusion of these experiments globally, through a mixture of open invitational communications strategy (website, social media etc.) and curated events where mayors can share best practices of financing the great transition.

The main impact of these activities will be the design and development of

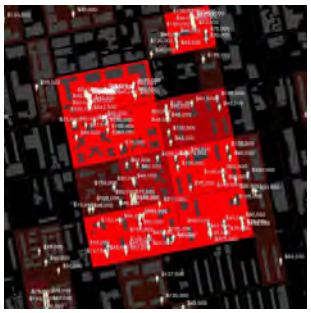
(4) Systems change funds where cities can access innovative financing support at a scale demanded from the challenges we face.

CIVIC CAPITAL LAB ACTIVITIES

Open Researching & Visualising: to build the case for, and outline the pathway(s) towards, new modes of civic capital investment. This involves investigating a range of topics – from analysing the deficiencies in the status quo (e.g. the human and financial cost of the lack of preventative cate) to exploring new futures (e.g., how we can use insurance to monetize the avoidance of civic risk). Accessible data-visualisation and compellingly designed provocations will be key to engage those outside our echo chamber.

Hosting a public discussions: to improve a shared understanding of new pathways, and build legitimacy around them. This will require creating the platforms to host a conversation about the civic capital deficit, crowd-sourcing hypotheses around how we got here and how to change it. It will invite a breadth of protagonists —from institutional investors who understand the relevance of asset-allocation portfolio tactics, to citizens with lived experience of society's challenges — aiming toward co-creating an agenda for change. We do not think it will be sufficient to follow our old, institutionally closed 'think tank' models of delivering research.

Advocating for change: to overcome systemic lock-ins and barriers that might stand in our way of following this pathway. The interdependencies of our system means that there are multiple bits of dark matter (e.g. fiscal policy-development processes, accounting norms, contracting legislation) that require a re-think. New definitions of progress and justice, which integrate social justice and natural systems justice, are required. Beyond the public discussion to raise our appreciation for such issues, we believe certain stakeholders who have the capacity to bring about change need to be engaged. To do this, we are planning to engage these stakeholders through formal and informal channels and publish communications which bring coherence to our future vision.

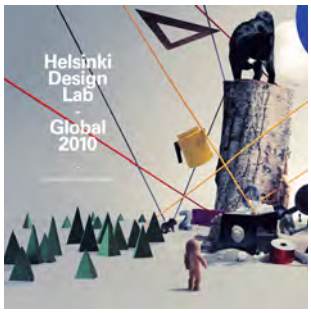


Million Dollar Blocks

#Metoo

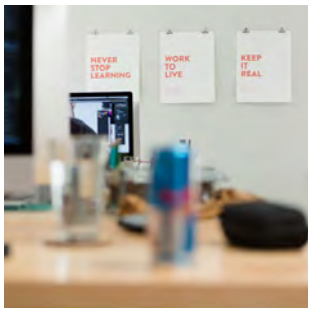
Extinction Rebellion

Convening unlikely allies: to create the spaces for co-creation between people who typically never sit in the same room. A crucial part of what is needed is to shift the power imbalances between who controls capital and how decisions get made. Deep leadership and action are needed to establish new levels of responsiveness and accountability to people who have been systematically excluded through past and present intersections of patriarchy, racism and colonialism. To do this, we plan to host events and design change labs that invite people from all walks of life — from Indigenous peoples, civic activists, institutional investors, service users, SMEs, universities etc.



Helsinki Design Lab

Prototyping: to build and test the innovative mechanisms which can help support these pathways to investment. Working with global and national partners, using the open research derived from other work strands that investigate potential financial mechanisms, procurement models and accounting frameworks. These prototypes will be co-created through a series of open hack-days and live experimentation through living lab type contexts in the cities.



Re-focus Lab

Building the process for institutional capacity development: to build the experiments and proof cases for implementing this strategy. To do this we are in the process of designing a 'Civic Capital Lab', whose mission would be to work with multi-stakeholder groups from specific cities to bring together our diverse energies around a shared objective. What this looks like in practice is yet to be determined. Will it be about setting up specific platform organisations to host local impact movements; open workshops to map the issues and civic assets in a city; 100-day targeted campaigns on actionable deliverables (e.g. reduce asthma costs by 5%) and/or multi-year modalities of system asset mapping and ethnography?


Way to Wellville

ACKNOWLEDGEMENT

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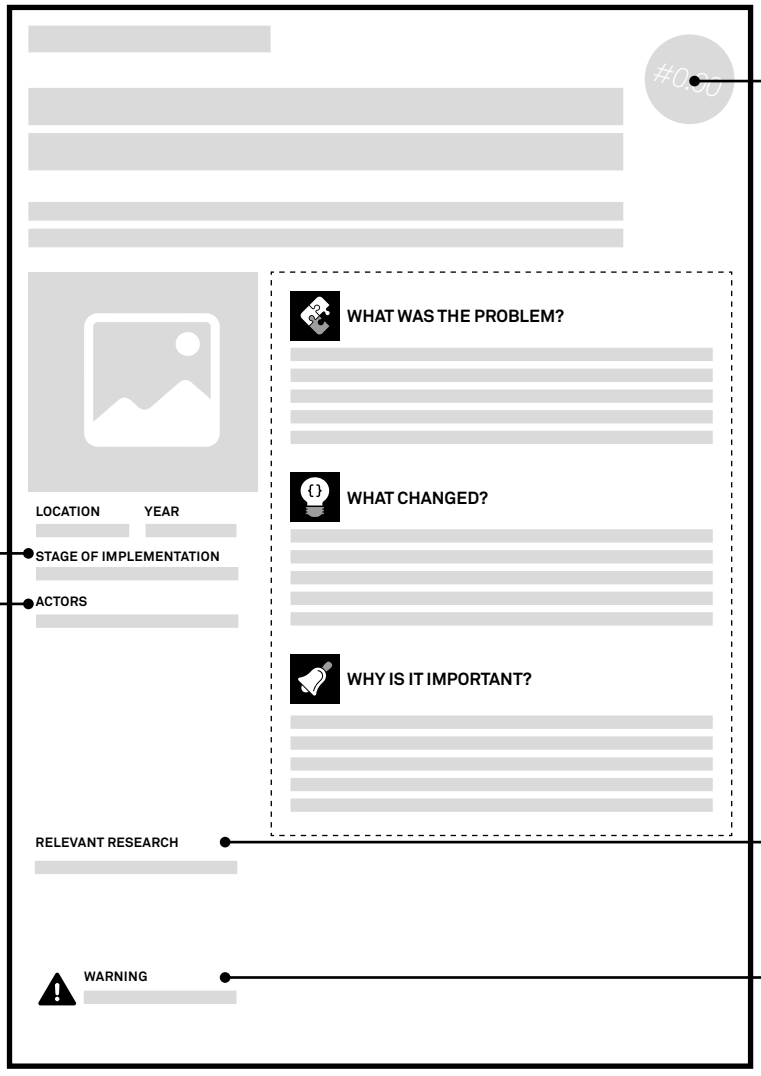
CASE STUDIES

STAGE OF IMPLEMENTATION

- ***Ideating*** *embryonic ideas with huge potential for development*
- ***Pilot*** *prototypes which are being tested and iterated*
- ***Scaling*** *successful early-stage approaches which are being scaled-up*
- ***Established*** *examples that have either existed for a long time in their context, or are generally accepted*



References for case studies on page xx

RELEVANT RESEARCH

Chosen case studies represent a drop in the ocean of innovation - we've highlighted some similar projects and reports for those interested.

WARNING

Case studies are not without unintended consequences - we've provided some prompts for potential risks.

ACTORS

Case studies involved many ***actors*** *- we highlighted the key ones across:*

- ***Private actors e.g.*** *Commercial Banks; Institutional Investors; Venture Capital / Private equity; Impact/ responsible investors; Fund Managers, Credit agencies etc. ; Insurers; Companies and Service provider e.g. Developers, Modelling companies, utilities providers, CICs, B-Corps ...*
- ***Public actors e.g.*** *Local authorities, Municipal Government, National Government, Development Banks, Regulators ...*
- ***Civic actors e.g.*** *Individuals; Households; Communities; Civic organisations e.g. Social Enterprises; Charities, NGOs, Foundations ...*

SYSTEMS FINANCING

Rather than focusing on particular sectors – as in traditional industrial policy – mission-oriented policy focuses on problem-specific societal challenges, which many different sectors interact to solve. The focus on problems, and new types of collaborations between public and private actors to solve them, creates the potential for greater spillovers than a sectoral approach. It was this approach that put a man on the moon, and lay behind the creation of the Internet and entire new sectors like biotechnology, nanotechnology, and the emerging green technology revolution.

Marianna Mazzucato,
Director of IPPP

#S.01

ARMENIA'S ENVIRONMENTAL LICENSING

Stewarding the commons through a third-party managed publicly owned Natural Wealth Fund

LOCATION
Armenia

YEAR
2018

STAGE OF IMPLEMENTATION
Concept

ACTORS
Public: National Government
Private: Fund managers

RELEVANT RESEARCH
For other innovative ways of financing biodiversity (and stopping deforestation) see 'The Little Biodiversity Finance Book' [33]

WARNING
Requires transparency to ensure against corruption

WHAT WAS THE PROBLEM?

Armenia is undergoing rapid change, with accompanying environmental issues linked to growth and development. Without the right management approach, assets are being over-used in order to generate income from logging, hunting etc with limited accountability and high corruption.

WHAT CHANGED?

A pilot to create an independently managed Sovereign Natural Wealth fund - where natural assets are placed in a privately managed (publicly owned) revolving fund. Generating capital through: (1) tax credits (2) environmental licensing and dividends from (3) environmental bonds.

WHY IS IT IMPORTANT?

Like some states in the US [1], this approach provides a profitable way to prevent exploitation of environmental resources, through ring-fenced natural assets, revenue-generating activities and transparent, real-time data collection.

#S.02

COMMUNITY REINVESTMENT ACT (CRA)

Growing lending in disadvantaged communities through banking regulations that encourage local re-investment

LOCATION
USA

YEAR
1977

STAGE OF IMPLEMENTATION
Established

ACTORS
Public: National Government
Private: Banks

WHAT WAS THE PROBLEM?

Banks and other financial institutions across the US were failing to meet the needs of the communities in which they operated - with particularly negative consequence with those neighbourhoods who had suffered from discriminatory racially-biased practices like redlining.

WHAT CHANGED?

Congress passed legislation to encourage financial institutions to lend locally. Banks have a CRA compliance record (based on a complex algorithm including no. of branches, no. of loans) which can be accessed and commented on by anyone and is taken into account when approving applications for different activities e.g. opening new branches.

WHY IS IT IMPORTANT?

This transparent compliance approach has prompted partnerships between banks and community groups to promote access to credit, led to $1 trillion in services as well as leading to the creation of Living Cities - which has (amongst other things) launched a $31 million Blended Catalyst impact-investing debt fund for urban innovation.

WARNING
Some critics claim that CRA led to slipping lending practices & 2008 financial crash (although unclear)

#S.03

ALASKA'S PERMANENT FUND

Ensuring the enduring and democratizing legacy of revenue from oil, through a sovereign wealth fund & citizen dividend

LOCATION
USA

YEAR
1976

STAGE OF IMPLEMENTATION
Established

ACTORS
Public: National Government
Private: Management

RELEVANT RESEARCH
UBI trials have since been implemented globally, with varying degrees of success, see [34] for details on Finland's trial

WHAT WAS THE PROBLEM?

When mass oil deposits were found in Alaska, the rapid spending of the revenue created ($900 million bonus in 1969 from leasing out the oil fields), shocked government and citizens as they realised they lacked the infrastructure to benefit future generations.

WHAT CHANGED?

Through a referendum, Alaskan citizens voted to create a trust where at least 25% of the oil revenue would be put into a dedicated fund for future generations, with future legislators able to choose how to invest.

WHY IS IT IMPORTANT?

The foresight to create this fund has helped to secure an annual citizen dividend (started in 1982) for all residents of Alaska - demonstrating how long-term state investment can yield democratizing income in the future.

#S.04

BY & HAVN CITY WEALTH FUND

Financing urban development through a publicly owned, third-party managed fund of urban land assets

LOCATION
Denmark

YEAR
1990s

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: Municipal Government
Private: Management

RELEVANT RESEARCH
Other forms of Land-financing include land-leasing and Local-Asset-Backed Vehicles (LABV) [35]

WARNING
Developments focused on luxury houses & raised land prices (gentrification), with govt. introducing affordability requirements (25% of houses at 60% market value)

WHAT WAS THE PROBLEM?

Urban renewal requires huge amounts of capital, yet governments often lack the upfront means of financing it, and can be unwilling to raise taxes to fund large scale infrastructure.

WHAT CHANGED?

Copenhagen transferred land to By & Havn, a publicly-owned, privately-run corporation, for development. The land was re-classed as residential, therefore boosting its value. By & Havn then takes loans against it to be invested in infrastructure, creating further value increase. By & Havn subsequently sells or leases the land to developers, and the revenues generated are used to service their debt.

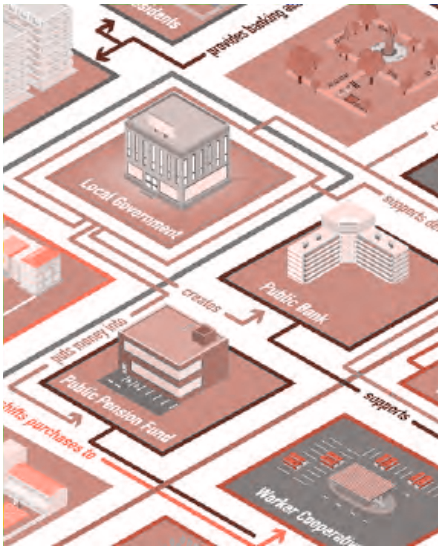
WHY IS IT IMPORTANT?

By & Havn have raised billions of dollars and overseen half of all redevelopment projects (since 2007) without raising any taxes - a similar model is being pursued in Haifa, Lyon and Hamburg to name a few. They are also able to generate new income streams through contract clauses, whereby property owners have to pay an annual fee in the case of a metro being built near their property.

#S.05

COMMUNITY ANCHOR INSTITUTIONS

Harnessing what is already spent, by re-localising & coordinating key institutions' procurement strategies



LOCATION
Cleveland, USA

YEAR
2010

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Civic: Local institutions
Private: Local businesses
Public: Municipal Government

WARNING
Requires improved data sharing practices to test outcomes

WHAT WAS THE PROBLEM?

Cities across North America and Europe are divided places - with disadvantaged communities often feeling limited benefit from wealthy local institutions, who often procure services from large multi-national corporation - even when research shows 63% spent with SMEs is re-spent locally vs. 40% for large companies.

WHAT CHANGED?

To try leverage the spending power of local institutions, Cleveland set up the 'Cleveland Greater University Circle Initiative' (GUCI) - a partnership between various institutions (including the hospital and university), the public sector and wider civil network - to reinvest in the local economy.

WHY IS IT IMPORTANT?

This local procurement strategy provides a replicable model to redirect local spending for community wealth - driving huge benefits. For example it has already been translated to Preston, UK which saw the second biggest improvement in terms of deprivation index in the UK between 2010 and 2015.

#S.06

LAND VALUE TAX

Sharing the uplift in land-value increase, and growing public revenues, through land taxation

LOCATION
USA

YEAR
1975

STAGE OF IMPLEMENTATION
Established

ACTORS
Public: Municipal Government

WHAT WAS THE PROBLEM?

The city of Harrisburg suffered a massive hurricane in the 1970s, and was subsequently one of the USA's most distressed cities - having lost 800 businesses and a third of its population in 20 years.

WHAT CHANGED?

A land value tax (coupled with a reduced tax on buildings and property) was used as a tool to stimulate development and to discourage land speculation - growing the tax base from $212 million in 1982 to $1.6 billion in 2010

WHY IS IT IMPORTANT?

Demonstrates the potential value of uncovering hidden value in private assets for public good (between 1982-2010 crime rate reduced 46%; vacant structures by 80%)

WARNING
The visibility of property and land taxes, makes change politically very sensitive

SYSTEMS FINANCING

#S.07

FACADE LEASING

Unlocking the value of material re-use & energy cost-savings in construction, through new legal contracts & service-agreements

LOCATION
Netherlands

YEAR
2016

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: University (TU Delft)
Private: Contractors, developers

RELEVANT RESEARCH
For other examples of circular economy business models, see the Ellen MacArthur Foundation's report on Circular Finance [36]

WARNING
Without transparency could engender rent-seeking with costs not passed on

WHAT WAS THE PROBLEM?

Buildings are responsible for 40% of energy consumption in the EU, and even though we know façades can improve energy performance, they are rarely efficient as developers lack incentives, and building occupiers lack capital (and capacity) for retrofitting.

WHAT CHANGED?

This pilot scheme leases the façade of a building to the initial contractor. Rather than the building owner purchasing the facade a 'make-dispose' product, the contractor offers it back to the building occupier as a long-term service contract on a fixed annual fee.

WHY IS IT IMPORTANT?

By moving from a product to service model, the roles and time-scales (as well as incentives) shift for the different actors. Instead of focusing on cost-savings at the point of sale, the contractors are incentivized to increase energy efficiency and re-use the materials (as the facade is still their asset throughout its life)

#S.08

ENERGY-EFFICIENT STREET LIGHTING PPPS

Financing energy-efficiency city-scale upgrades through innovate 'product-as-service' procurement

LOCATION
USA

YEAR
2014

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: Municipal Government
Private: Service providers (Phillips)

RELEVANT RESEARCH
There is much research on infrastructure financing, and innovative procurement methods for example in the Handbook on Urban Infrastructure Finance [37]

WHAT WAS THE PROBLEM?

Even though, upgrading street lights to LED can bring around 35% operational cost savings (as well as associated reduced carbon emissions), municipal budgets rarely have the resources to foot the upfront capital expenditure bill.

WHAT CHANGED?

Phillips enter into service agreements with cities, where they provide 100% project financing. The cities pay off upfront capital from annual savings of reduced energy consumption.

WHY IS IT IMPORTANT?

City-wide service-agreements help to provide the up-front costs to kick-start new investments. Leading to new value flows (e.g. from cost-savings) within a reduced public risk agreement - enabling cash-strapped public actors to implement greener infrastructure.

WARNING
System financing doesn't always come with system decision-making with increasing scientific evidence that LED lighting might be bad for health, leading to health costs down the line

#S.09

CROSSRAIL'S RATE LEVY

Financing public infrastructure by capturing future business rates uplift across London

LOCATION
London

YEAR
2012

STAGE OF IMPLEMENTATION
Established

ACTORS
Public: Municipal Government
Private: Businesses

RELEVANT RESEARCH
For more information on land-value capture taxes - an example of a country-focused report is the UK Parliament's report [38.a] or Canada [38.b]

WHAT WAS THE PROBLEM?

Financing public transport requires huge sums of money, with private sector benefits (businesses, land owners etc.) left uncaptured by the public sector. For example the Greater London Authority (GLA) required £14.8bn for a new cross London line - Crossrail.

WHAT CHANGED?

The GLA (on top of issuing bonds and using municipal budget) raised £4.1bn from a business rate supplement which charged a levy on all non-domestic properties (based on the property value) across London.

WHY IS IT IMPORTANT?

Rather than setting up a neighbourhood scale defined boundary of uplift - as with BIDs or betterment districts - this regulation put forward a concept of city-wide value creation.

SYSTEMS FINANCING

S.10

ENERGIEWINDE MISSION

Exiting nuclear power through a government-backed multi-stakeholder mission

WHAT CHANGED?

In a bid to exit nuclear, this approach mixed policy, legislation and investment (innovation & bottom-up research) into one simple idea that makes it clear to citizens that their government, scientists and businesses are working to make their society free of dependence on nuclear power.

LOCATION
Germany

ACTORS
National Govt.
Private sector
Civic

SYSTEMS FINANCING

S.11

TRANSLINK, VANCOUVER

Transport authority setting up a real estate division, to fund metropoliton mobility

WHAT CHANGED?

Translink launched a real estate division (which will develop property) as a way to generate funds for transit. Translink will purchase land along new transit routes and around stations and increase the value through intensification of land use zoning

! *While this may enable transit-oriented developments, Vancouver is simultaneously experiencing a massive housing crisis*

LOCATION
Canada

ACTORS
Municipal Govt. (statutory authority)

SYSTEMS FINANCING

S.12

WORKPLACE PARKING LEVY

Tackling unsustainable transport practices through a workplace levy

WHAT CHANGED?

In order to incentivise behaviour change, sin taxes aim to price negative behaviour. In order to decrease private transport use (to both reduce congestion and free up land), this award-winning policy placed levies on employers who provide workplace parking. The £220m raised from the levy has helped to draw in a further £420m from national government & led to a 4.5% patronage increase in bus/tram usage from 2013-2017.

LOCATION
UK

ACTORS
Municipal Govt.

SYSTEMS FINANCING

S.13

TRY TEST & LEARN INVESTMENT FUND

Improving evidence use in welfare investment through an evidence-generating fund

WHAT CHANGED?

A fund (96M AUD) which selects projects based on their potential to generate evidence on the best way to reduce long-term reliance on income support, rather than deliver short-term returns. It invests in innovative approaches as well as ensuring sufficient resources are spent on rigorous monitoring and evaluation.

LOCATION
Australia

ACTORS
National Govt.

SYSTEMS FINANCING

S.14

COVENANTS - CHURCH REPAIR LIABILITIES

Ensuring future contributions to common infrastructure through legal obligations

WHAT CHANGED?

A legal way of capturing future value without any legislative change - whereby properties are sold with the stipulation that further property or land-owners are obliged to pay for future church repair needs. This approach is still used globally, especially in the world of conservation e.g. future landowners must maintain woodland or refrain from using certain pesticides.

LOCATION
Various

ACTORS
Private landowners

SYSTEMS FINANCING

S.15

METRO MILAN

Funding a new station from a levy on surrounding businesses

WHAT CHANGED?

A value-capture mechanism which involves setting up a special assessment districts. In Milan, a levy was assessed on properties within 500m of a new station (raising 36 billion lire) to fund the new station. After completion, a revolving local general fund was set up with the tax collected during real estate transfers (e.g. percentage of value of property sales)

LOCATION
Global

ACTORS
Municipal Govt.

SYSTEMS FINANCING

S.16

MANCHESTER'S LOCAL PENSION SCHEME

Harnessing what is being spent, by using local government pension schemes to fund local projects

WHAT CHANGED?

Greater Manchester's local pension scheme (£17.3 billion in assets under management) strategy is to invest 5% of assets locally - to support savers today through urban development. This requires legislation change, as pension funds are required to not over-expose themselves to particular geographies or sectors

LOCATION
UK

ACTORS
Municipal Govt.

SYSTEMS FINANCING

S.17

I-CUBED BOSTON

Financing urban development through bonds backed by future incremental revenues

WHAT CHANGED?

An approach which issues municipal bonds to pay for infrastructure, involves a legislation to approve amount (in this case $250 million). Repayment for these bonds come from (1) creating special assessments area near the project, and levying a fee on property during construction and (2) the new property tax revenue generated after completion.

! *A similar approach to develop New York's Hudson Yards was slow to develop, meaning the city was left paying interest for the bonds*

LOCATION
USA

ACTORS
Municipal Govt.

SYSTEMS FINANCING

S.18

HARLEM CHILDREN'S ZONES

Delivering children outcomes through collective impact funds

WHAT CHANGED?

The HCZ (a non-profit organisation) supports a place-based system change approach. It designs, funds, and operates a holistic system of education, social-services and community-building programs to counter the negative influences of crime, drugs and poverty and help children complete college. Was scaled across the US with Obama administration's 'Promise Zones'.

LOCATION
USA

ACTORS
Civic & Public

SYSTEMS FINANCING

S.19

TAF THE ATMOSPHERIC FUND

Multi-financing of climate change mitigation strategies through a designated fund

WHAT CHANGED?

In 1991, the city set aside a portion of the profits from a sale of a city property to set up the world's first municipal agency designed to innovate solutions to climate change. This $23 million self-sustaining revolving fund has creates partnerships with all sectors of the community, city departments and agencies to facilitate action on climate change as well as providing grants and loans

LOCATION
Canada

ACTORS
Municipal Govt.

SYSTEMS FINANCING

S.20

PENZANCE AS PLASTIC FREE

Reducing city-wide plastic consumption through a multi-stakeholder mission (and pledge).

WHAT CHANGED?

In order to become the UK's first "plastic-free" community, Penzance (which already has a culture of marine conservation) needed leadership (a steering group) and policy change (get the local authority to pledge to support plastic-free initiatives) to institutionalize the general direction

! *Systemic barriers e.g. newsagents with existing contracts with plastic bottle suppliers*

LOCATION
UK

ACTORS
Civic
Local Government

SYSTEMS FINANCING

S.21

FAIR PENSIONS & LIVING WAGE CAMPAIGN

Driving impact through smart philanthropy portfolios & citizen regulation

WHAT CHANGED?

Foundations often miss out on potential impact by encouraging their asset managers to be socially engaged as investors. Living Wage foundation used their voice as shareholders - when they began just 2 of FTSE100 companies were accredited living wage employers, now one third are accredited.

LOCATION
UK

ACTORS
National Govt.

SYSTEMS FINANCING

S.22

BIG SOCIETY CAPITAL

Driving social change through a fund levered from dormant accounts

WHAT CHANGED?

A social investment wholesaler (BSC) was created through legislation by UK government with mission to enable other bodies to provide support to frontline & third sector organisations. Innovative capital raising from (£600m) from dormant bank accounts.

LOCATION
UK

ACTORS
National Govt.
Banks

SYSTEMS FINANCING

S.23

WAY TO WELLVILLE

Supporting civic groups to invest in innovative approaches to preventative care through a 'health-system accelerator'

WHAT CHANGED?

A ten-year programme across five communities in order to prototype a framework, and generate evidence for the benefit of investing in preventative health care. It supports communities the way a business accelerator helps start-ups e.g. a dedicated advisor to help them develop strong leadership teams and implement approaches and monitor impact.

LOCATION
USA

ACTORS
Private & Civic

SYSTEMS FINANCING

S.24

TORONTO'S SOCIAL PROCUREMENT

Driving inclusive growth through widening access to public procurement

WHAT CHANGED?

A policy to include social clauses in the tendering of public services. It establishes clear guidelines and tools to ensure that businesses owned by members of disadvantaged groups participate in the bidding process for public contracts with examples including the Eglinton Crosstown, where the developer will help to provide 300 jobs to people from historically disadvantaged backgrounds.

LOCATION
Canada

ACTORS
Municipal Govt.

SYSTEMS FINANCING

S.25

COMMISSIONING BETTER OUTCOMES

Cutting across complex policy areas through shared pay-for-performance funds

WHAT CHANGED?

A £40M fund which pay outcomes for SIBs or other projects in 'complex policy areas' which cross traditional government silos. This pool of capital will attract interest and stimulate innovation. Also, fundamentally it encourages a sharing best practices and therefore will overcome inefficiencies of a fragmented market.

LOCATION
UK

ACTORS
National Govt.

FUTURE-ORIENTED FINANCING

Climate change is the Tragedy of the Horizon. We don't need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix.

***Mark Carney**,*
Governor of the Bank of England

#F.01

INVENTION OF PRIVATE PROPERTY INSURANCE

Reducing future-costs from damage, by creating private property insurance companies who purchased fire engines

LOCATION
London, UK

YEAR
1780

STAGE OF IMPLEMENTATION
Established

ACTORS
Private: Insurers

WHAT WAS THE PROBLEM?

Fires were common in the crowded wood-built London of the 1600s, but with no institution incentivized to mitigate risks, there were no fire brigades to call - all this changed when the great fire of London in 1666 destroyed the homes of 70,000 of the 80,000 inhabitants of the city of London.

WHAT CHANGED?

The first property insurance company was set up to help households hedge their risk from fires. Soon after these companies recognised that they could reduce their future liabilities (future rebuilds) by putting out fires more effectively - acquiring fire brigades and (eventually) joining forces to create a London wide fire brigade.

WHY IS IT IMPORTANT?

The funding of fire prevention was unlocked by creating companies (or institutions) capable of assessing, and holding the city-wide risks of fire damage - helping to create a more resilient, productive London.

WARNING
These institutions were catalysed by a destructive (and avoidable) event

#F.02

GIBSONS ECO-ASSET MANAGEMENT

Unlocking capital, through property taxes, for eco-asset stewardship through placing it on the municipal balance sheet

LOCATION
Canada

YEAR
2014

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Public: Municipal Government

RELEVANT RESEARCH
For more information on natural capital accounting, there are numerous positive and critical reports - a good resource is The Economics of Ecosystems and Biodiversity [39]

WARNING
Does Financialization obscure nature's intrinsic value, commodifying it & leading to great risk?

WHAT WAS THE PROBLEM?

Even though we derive huge benefits from natural civic assets - our municipal accounting and asset management strategies normally take a very one-dimensional view of assets (roads, sewers, bridges etc.) even when these operate more like liabilities (incurring huge maintenance costs).

WHAT CHANGED?

Gibsons recognised that their aquifer accounted for 75% of potable water. In order to respect and preserve this, Gibsons passed a municipal asset management policy that explicitly recognizes natural assets & creates obligations to maintain and replace natural assets alongside capital assets.

WHY IS IT IMPORTANT?

By moving natural assets to the core of municipal decision-making, Gibsons has crystallised the risks of not preserving this aquifer - helping to make the economic case for ecosystem services. This helped to raise awareness and led to a positive referendum where citizens voted to increase their property tax to pay for its preservation.

#F.03

HOUSTON'S IKE DIKE - RESILIENCE BONDS

Monetizing the avoidance of catastrophic events, by forward-financing risk-mitigation strategies from saved insurance premiums

LOCATION
Houston, USA

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Public: State & Municipal Govt.
Private: Utility companies, Insurance brokers

WARNING
Requires political will, and those willing to act

WHAT WAS THE PROBLEM?

Houston is vulnerable to exorbitant hurricanes - such as Harvey, which flooded hundreds of thousands of homes and businesses, wreaking $125 billion in damages. Although officials have rallied around a plan for a $15 billion system of seawalls and floodgates, sourcing the upfront capital has proven challenging.

WHAT CHANGED?

A 'resilience bond' is being investigated where Oil companies, chemical makers, railroads and others with assets exposed to flood risk would collectively issue 'resilience bonds' to replace their traditional insurance. When the storm barrier is complete, payments to the bond investors would drop to reflect the lower risk of flooding. The companies would continue paying the higher, pre-dike rate, and the difference would go toward paying off the project.

WHY IS IT IMPORTANT?

Although the $15 billion pails in comparison to the potential damages, we previously lacked the mechanisms to gather diffuse city-wide risks to ensure a multi-stakeholder preventative strategy. This project demonstrates how the catastrophe bond market, where investors take on risk for climatic events in order to get above-market returns and diversify their portfolio, can be used to fund resilience infrastructure.

#F.04

REEF + BEACH INSURANCE FUND

Funding reef restoration through collaboration of affected parties & insurance premium reduction

LOCATION
Mexico

YEAR
2017

STAGE OF IMPLEMENTATION
Concept

ACTORS
Private: Insurers (Swiss Re), local businesses

WHAT WAS THE PROBLEM?

We know that every one meter of coral reef lost translates to $20 billion lost in infrastructure. These risks are economically 'invisible' for individual actors (as the threats and benefits so diffuse) - which means that no one actor has the incentive to mitigate them.

WHAT CHANGED?

This concept is for an insurance policy, paid for by a fund (resourced by local hotels, restaurants, developers and the state) which (1) restores the reef through reduced insurance premiums and (2) purchases parametric catastrophe insurance to pay for recovery.

WHY IS IT IMPORTANT?

Provides a strategy to align multiple economic interests (short-term tourist attraction, long-term flood prevention etc.) in one fund, that can then capitalize on the insurance savings from resilience financing.

WARNING
Complexity of reliably modelling the reduction of risk from resilience investments

#F.05

STORMWATER CREDITS & DEBITS

Investing in stormwater climate mitigation through various strategies (Credits + EIB)

LOCATION
Washington DC

YEAR
2014

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: Municipal Government
Civic: Quantified Ventures
Private: developers

WARNING
Cap n trade often under-prices externalities - with limited impact

WHAT WAS THE PROBLEM?

The burden of flooding (the third largest source of federal government financial exposure in the US) is often placed on the government, who lacks the capital expenditure to invest. Moreover, many actors are responsible and stand to benefit from more preventative strategies e.g. storm-water mitigation.

WHAT CHANGED?

Washington DC has pursued multi-pronged approach including strict regulation, an environmental impact bond and a storm-water credits system. The latter prices flooding externalities by introducing the first private-to-private storm water trading market where developers are obliged to either build storm water facilities or purchase credits (or a mix).

WHY IS IT IMPORTANT?

By pricing these externalities, this approach provides market incentives for participants to exceed regulatory requirements - making investments in green roofs, rain gardens or other infrastructure projects to receive stormwater retention credits.

#F.06

FORECAST BASED FINANCING

Accelerating availability of capital for aid through real-time automated payment using weather predictions and smart-contracts

LOCATION
Various

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: Humanitarian aid organisations (RedCross)

WHAT WAS THE PROBLEM?

In a humanitarian disaster, the value of money is tightly linked to time, yet unlocking finance often relies on cumbersome processes - with humanitarian organisations not set up to finance disaster-preparedness strategies.

WHAT CHANGED?

This Red Cross fund uses smart contracts & pre-agreed triggers – such as weather predictions. So rather than waiting for torrential rains, an automatic release of money becomes available for pre-agreed, early action plans. Pilots have already demonstrated huge cost-savings.

WHY IS IT IMPORTANT?

This demonstrates how radically transparent, real-time technologies can be harnessed to better capture future cost-savings (as long as institutions are set) up to harness them.

WARNING
Without quality data, critics concerned that limited resources will be misspent

#F.07

SOCIAL IMPACT BONDS (SIB)

Driving evidence-use in welfare services, and overcoming risk-barriers through results-based financing programmes

LOCATION
UK, Canada, etc.

YEAR
2010

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: National or municipal Govt.
Private: Upfront risk investors ; social purpose organisations;

RELEVANT RESEARCH
After almost ten years of implementing social impact bonds, there is much research around their impact such as [40] and new iterations like 'EQT'

WARNING
High costs of bespoke products and unintended consequences from tyranny of metrics

WHAT WAS THE PROBLEM?

Our current welfare and social services systems are failing those that need it most, with change required to tackle complex social problems - yet government is unwilling to fund programmes without first rigorously proving effectiveness.

WHAT CHANGED?

A type of PPP which revolved around a new contract (between initial service investor, service provider & government) whereby the public sector commits to paying back the investor only if a target reduction in recidivism was met in the control group. The first, in Peterborough, ended early due to success of the service and national rolling out of the programme.

WHY IS IT IMPORTANT?

Results based financing demonstrate safe value-capture mechanisms. Although they are currently plagued with complexities (from higher costs of bespoke solution to negative incentives associated with private capital incentives), these are being overcome as we improve our ability to monitor & evaluate complex systems. It also provides a scalable model, having spread to various countries including Canada (with SIBs including those to provide training to unemployed workers)

#F.08

MILLION DOLLAR BLOCKS

Communicating the hidden cost of incarceration through data mapping to incentivise crime prevention spending

LOCATION
USA

YEAR
2010

STAGE OF IMPLEMENTATION
Concept

ACTORS
Civic: Organisation (Justice Mapping Centre)

WARNING
Limited change on the ground to date

WHAT WAS THE PROBLEM?

The cost of incarceration in the U.S. is more than $1 trillion (six percent of GDP), with inmates unevenly distributed across the US. Communicating the implications of that, in all its complexity, is difficult with words, yet with almost a third of our brain devoted to vision, a civic group tried another way.

WHAT CHANGED?

Justice Mapping Centre produced an eye-opening way to help grasp the costs of over-imprisonment, by mapping the residential addresses of every inmate and highlighting areas where more than $1 million is being spent annually to incarcerate the residents of a single block.

WHY IS IT IMPORTANT?

Mapping showed both the exorbitant economic cost of incarceration as well as the violence to neighbourhoods of a flawed judicial system - catalysing approaches such as 'Transforming Safety Colorado' which provides grants for crime prevention investments e.g. organisations that provide access to finance for local businesses.

FUTURE-ORIENTED FINANCING

#F.09

TREVISO'S PPP & HEALTH IMPACT FUND

Financing preventative health-care through a place-based fund, supported by the developer of the hospital

LOCATION
Italy

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Private: Developer (Lendlease)
Civic: Organisation (PlusValue)
Public: Municipal Government, European Investment Bank

WARNING
Reduced-interest rate loan was used to induce corporate venture capital

WHAT WAS THE PROBLEM?

Although we are increasingly aware of the economic benefit of preventative care - preventive school-based health-care demonstrating a return of $4.20 per dollar - our health systems are focused on treating demand for health (e.g. building more hospitals) rather than tackling supply; in part due to the way in which they are funded.

WHAT CHANGED?

In order to finance preventative care, this place-based impact fund was set up by social impact organisation and the contracted developers of a new hospital (which is being developed through a 'build-operate-transfer' model). Lendlease (the developer) supported the fund initially from interest savings of a reduced interest-rate loan from the European Investment Bank.

WHY IS IT IMPORTANT?

Demonstrates a first of its kind private (corporate venture capital) impact fund focused on financing preventative care, as investments will be focused on social entrepreneurial initiatives relating to public health.

FUTURE-ORIENTED FINANCING

F.10

FRESNO'S HEALTH IMPACT BOND

Financing preventative health strategies from reduced insurance claims

WHAT CHANGED?

This approach financed the removal of mold from the home of asthma sufferers through a 'impact bond' - (where payment is based on outcomes). To prove the business case, it used an actuarial-based saving methodology (based on the insurance claims data) to measure reduction in emergency and hospital services.

! *Like many payment for results programmes, Patient capital is needed foundation essential as initially difficult to access data*

LOCATION USA

ACTORS Third: Foundation

FUTURE-ORIENTED FINANCING

F.11

PREVENTATIVE HEALTH-BOND

Financing pre-hypertension prevention through Canada's first health-related social impact bond

WHAT CHANGED?

Hypertension is the single most important risk factor for stroke, yet there is a lack of screenings which can help sufferers manage their symptoms. Two foundations (McConnell & Heart and Stroke) have developed a Social Impact Bond to be used to finance 7,000 pre-hypertensive people into the community hypertension prevention initiative.

LOCATION Canada

ACTORS Third: Foundation

FUTURE-ORIENTED FINANCING

F.12

FOREST RESILIENCE BOND

Aligning interests in ecosystem preservation through pay-for-performance financing

WHAT CHANGED?

A pilot of a bond for wildfire prevention methods (forest thinning, controlled burns). Investor receive returns from: (1) government from achieving goals for reducing number of mega-fires and (2) utilities who realize benefits of increased water supply and reservoir protection from avoiding polluting gasses.

LOCATION USA

ACTORS Private

FUTURE-ORIENTED FINANCING

F.13

MOODY'S FLOOD INTEGRATED RATINGS

Incentivising resilience investment through risk-related city credit ratings

WHAT CHANGED?

As a bond rating issuer, Moody's Investors Services, changed rating policies (in the aftermath of Puerto Rico hurricanes in 2017) so that state and local bondholders must account for climate change or face downgrades -which would mean higher interest rates.

LOCATION Global

ACTORS Private
bond rating issuer

FUTURE-ORIENTED FINANCING

F.14

CLIMATE RISK INFORMATION

Driving transparent investment in resilience through transparent open-source tools

WHAT CHANGED?

Using open-source Oasis modelling, this collection of modelling and risk analytics tools is available for stakeholders (city planners, commodity traders, infrastructure investors and engineers, and businesses) to manage physical risk, reduce uncertainty and enable resilience-building decisions

LOCATION
Europe

ACTORS
Private

FUTURE-ORIENTED FINANCING

F.15

CLIMATE SMART AGRICULTURE

Shifting lending practices, to drive regenerative agricultural practices

WHAT CHANGED?

Lending platform which is aiming to mainstream climate-smart agriculture (CSA) metrics into credit scoring system of financial institutions in order to improve agricultural resilience to climate change. To build this movement, this project brings together tools, actors and finance to help local lenders to incorporate climate risk into their portfolios and incentivise farmers to adopt CSA.

LOCATION
Kenya

ACTORS
Private

FUTURE-ORIENTED FINANCING

F.16

DANONE'S ESG COMPLIANCE

Pricing future environmental, social and governance risks through risk-related interest rates

WHAT CHANGED?

Danone, the consumer goods company, recently partnered with 12 leading global banks to lower their loan rates. This lowered rate is based on Danone transparently increasing its positive impact in the world - verified by a third party.

LOCATION
Global

ACTORS
Private

FUTURE-ORIENTED FINANCING

F.17

HOBOKEN'S FLOOD-MITIGATION CAR-PARKING

Financing innovative multi-purpose flood-mitigation infrastructure through user-fees

WHAT CHANGED?

This innovative infrastructure design (add in from research) and financing strategy was devised to cope with flood. The design was of a car park, that during excessive rains could act as a storm-water (pond?). The financing was initially going to come from a public-private-partnership using parking-user fees, but in the end a state loan covered costs with interest only accounting for part of the parking fees.

! *Success partially due to relative simplicity of situation (1 square mile only)*

LOCATION
USA

ACTORS
Municipal Govt.
Private

FUTURE-ORIENTED FINANCING

F.22

MTA'S CATASTROPHE BONDS

Tackling post-Sandy disaster, by using re-insurers tools

WHAT CHANGED?

New York's transport authority (MTA) found itself uninsurable with $5 billion in damage - meaning they couldn't get the subways and buses up and running. Therefore looked to a 'private' tool (catastrophe bonds) and performed a municipal first.

LOCATION USA

ACTORS Municipal Govt.

FUTURE-ORIENTED FINANCING

F.23

US 2017 PROXY VOTING SEASON

Large Institutional shareholders driving sustainable ventures

WHAT CHANGED?

The world's two largest asset managers, BlackRock and Vanguard, voted for the very first time to back shareholder proposals on climate-related issues - their huge voting power pushed through resolutions at Exxon Mobil and Occidental Petroleum.

LOCATION USA

ACTORS Private

FUTURE-ORIENTED FINANCING

F.24

WETLAND MITIGATION MARKET

Pricing negative Externalities from loss of mangroves through eco-credits banking system

WHAT CHANGED?

The system is based on an exchange between an ecological credit seller (an actor who is helping to restore ecosystem) and an ecological credit buyer (a land consumer who is destroying it). The mitigation market represent around 2 to 3.4 B$, with 1 792 mitigation banks for 580 625 acres conserved in US (most are wetlands).

LOCATION USA

ACTORS Private

FUTURE-ORIENTED FINANCING

F.25

PROTERRA'S BUSES

Financing energy efficient public transport through a product-as-service approach to electric batteries

WHAT CHANGED?

Risk-transfer partnership between authority and electric vehicle manufacturers where authority buys electric bus for the cost of a conventional diesel bus while entering into a 12 year 'battery service agreements' - where the service fee (which comes directly from the fuel savings) is guaranteed on the performance level of the busses.

! *Trend towards outsourcing can have dire effects - see Grenfell Tower, Carillion UK*

LOCATION USA

ACTORS Municipal Govt.

FUTURE-ORIENTED FINANCING

F.18

MY STRONG HOME

Using reduced insurance costs to fund resilient homes in hurricane-prone areas

WHAT CHANGED?

A benefit corporation which helps homeowners manage the risk associated with hurricanes by delivering specialized construction upgrades, which is financed through future insurance premium savings from a discounted insurance policy (due to the reduced risk) through the corporation's insurance partners.

LOCATION
USA

ACTORS
Private

FUTURE-ORIENTED FINANCING

F.19

25 YR INFRASTRUCTURE FINANCING

Raising private capital for long-term infrastructure financing

WHAT CHANGED?

An asset-management fund with 25 year time horizon (vs. normal 7-10); that manages the design and management of the projects. Returns are based only on contracted cash flows generated from assets (rather than returns on exits) - either from user fees (toll roads etc.) or (in the case that there are not fees) through performance based (PBC) contracts - removing risk for the public sector.

LOCATION
Global

ACTORS
Private

FUTURE-ORIENTED FINANCING

F.20

ECOTRUST SUSTAINABLE FOREST MANAGEMENT

Delivering financial returns from forest stewardship through sustainable timber

WHAT CHANGED?

An equity fund which aims to prove the economic viability of an ecosystem-based approach to forest management on private lands. It has invested in 13,000 private acres in Oregon, and generates returns primarily through sale of sustainably harvested timber supplemented with income from environmental markets (e.g. carbon credits, conservation easements) .

LOCATION
USA

ACTORS
Private

FUTURE-ORIENTED FINANCING

F.21

PROPERTY ASSESSED CLEAN ENERGY (PACE)

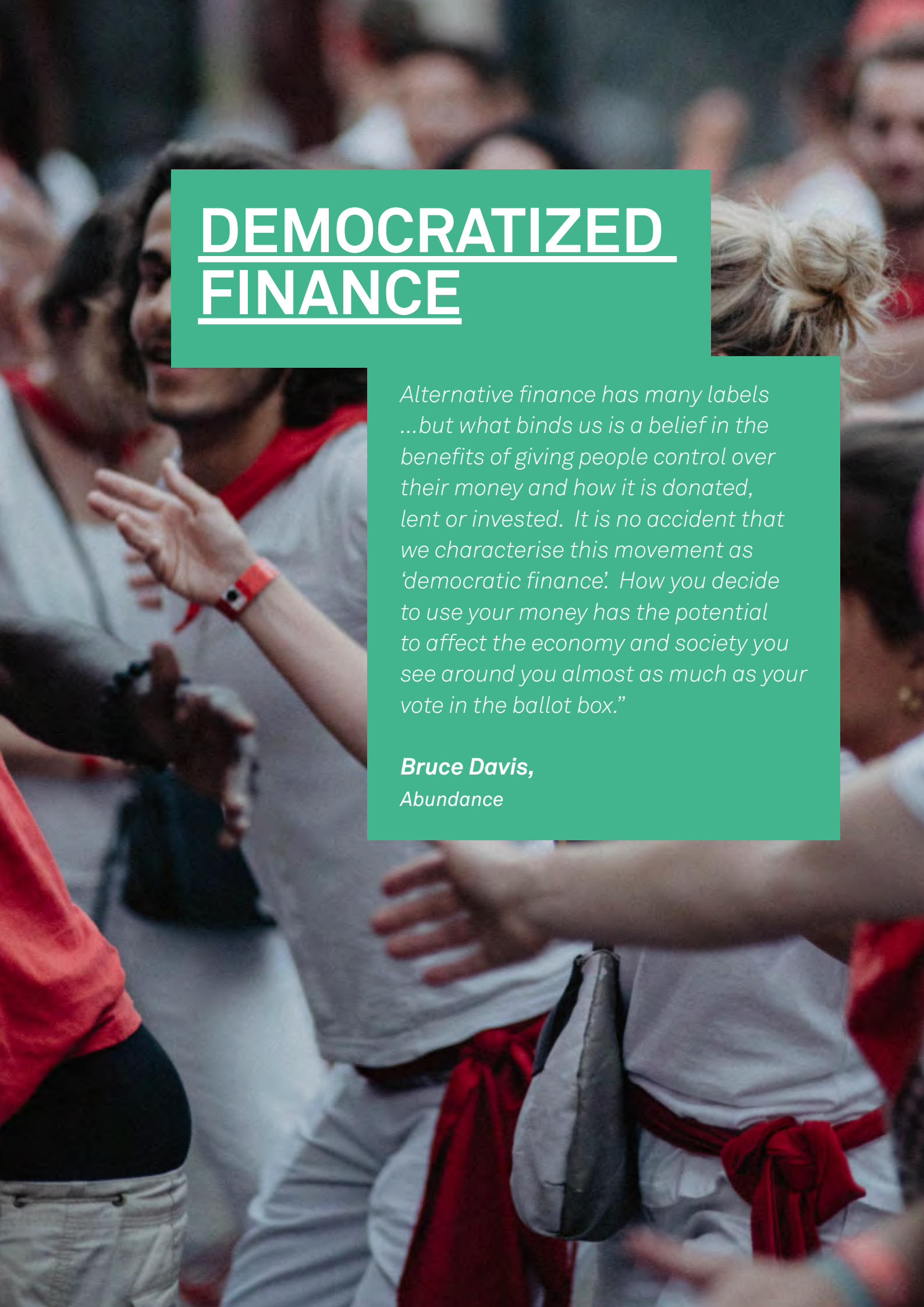
Financing private energy retrofits (over $200m to date) through PACE loans

WHAT CHANGED?

Launched in California (after passing legislation) these energy retrofits loans are paid by assessments on the property owner's property taxes. This means the municipality collects them and pays lending banks directly. It is tied to the property, not the future cost-savings nor the property owner's creditworthiness, that is the main consideration in underwriting these deals.

LOCATION
USA

ACTORS
Muncipal Govt.
Homeowners



DEMOCRATIZED FINANCE

Alternative finance has many labels ...but what binds us is a belief in the benefits of giving people control over their money and how it is donated, lent or invested. It is no accident that we characterise this movement as 'democratic finance'. How you decide to use your money has the potential to affect the economy and society you see around you almost as much as your vote in the ballot box."

Bruce Davis,
Abundance

#D.01

DEBT EDUCATION & SHARING - HOE STREET

Disrupting debt-markets through an arts project (online documentary and offline pop-up shop) on financial education

LOCATION
UK

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: Organisation, individuals

RELEVANT RESEARCH
Communications & arts projects that help to raise awareness around financial systems Strike Debt's Rolling Jubilee Campaign; YesMen - see [41]

WARNING
Complex system-change requires nuanced understanding

WHAT WAS THE PROBLEM?

UK household debt increased 7% in the last 5 years, with many families in junk debt - low grade debt that can be paid off for less. Yet very few citizens understand these dynamics in the UK.

WHAT CHANGED?

To raise awareness this programme, which was funded by the local council, and involving designers & civic activists, saw a documentary and pop-up shop set up in an old high-street bank and printed 'money' - with local civic actors faces on the bills. Proceeds from the sale go to both buying back debt and cancelling it as well as funding social projects.

WHY IS IT IMPORTANT?

The project generates money through an arts-related / reward crowd-funding model (with the notes available online and offline) - helping to raise awareness with local community on how money and debt are made in our current economic system.

#D.02

10C'S COMMUNITY BOND RAISE

Using community bonds to bring an underutilized property into community ownership, revitalized with multi-faceted operations and a long-term community vision

LOCATION
Guelph, Canada

YEAR
2016

STAGE OF IMPLEMENTATION
Established

ACTORS
Civic: Organisation (10C Shared Space & Chalmers Community Services Centre)

WHAT WAS THE PROBLEM?

10C, a not-for-profit organisation which provides space and a myriad of supports to community members and local social enterprises, needed to grow, control its rent and address physical accessibility in order to become sustainable and increase its impact. When a 100 year old building opposite city hall became available, 10C investigated how to finance its purchase and refurbishment.

WHAT CHANGED?

10C was interested in testing whether there was local appetite for social investment. To launch the expansion project, 10C did an initial bonds issuance – raising 0.4 million CAD from members. In total, over 2.3 million CAD has now been raised through community bonds, backed by a mortgage on the now fully-renovated and accessible property.

WHY IS IT IMPORTANT?

The physical asset will provide the project with long-term stability. 10C's mission is focused on scaling impact. Since expanding, 10C has grown to 200+ members and can now make long term programming decisions. 135+ investors provides a resilient financing strategy, with multiple investors both socially and financially invested, and willing to go into riskier zones than if they were making purely economic decisions.

WARNING
More granted funds, a higher contingency budget (construction ran 0.8 million CAD over), and proof of community readiness around social investing would have helped with project success.

#D.03

VIVACITE HOUSING DELIVERY

Tackling speculative investment in real-estate in order to create perpetual affordability through 'shared capitalisation'

LOCATION
Montreal, Canada

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: Organisation (Vivacite)

RELEVANT RESEARCH
Innovative forms of bottom-up housing delivery include Community Land Trusts (CLTs) - see Funding the Co-operative City for examples of civic financing [42]

WARNING
Difficult to scale up model, especially with current administrative cost etc.

WHAT WAS THE PROBLEM?

An overly centralised financing systems, where many Canadians lack the savings to last three months, coupled with the trend towards sky-rocketing land and house prices means that few of us have the capabilities to become homeowners.

WHAT CHANGED?

Vivacite is launching a programme of 'shared capitalisation' where they provide the deposit for the mortgage, the household commits to pay off the rest). When they resell the house, the household keeps 100% of their investment and shares the value-added (both due to investments and inflation) with Vivacite who can then use the money to help other households out.

WHY IS IT IMPORTANT?

Like a CLT, it ensures that value uplift benefits everyone - and provides for future home-owners who would otherwise be trapped in a life renting. Also, by allowing the household to be the homeowner (and share in the uplift), the household is incentivized to improve the house and feel a sense of ownership in the property and wider neighbourhood.

#D.04

NEIGHBOURLY: BERKELEY AND AUSTIN

Raising public capital, and growing community ownership, through transparent mini-bonds

LOCATION
USA

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: Organisation (Neighbourly)
Public: Municipal Govt.

WHAT WAS THE PROBLEM?

The US $3.6 trillion municipal securities market is concentrated on large institutional investors, with many bonds having $20,000 minimums, increasing people's alienation from the governance and funding of their cities. In addition, some cities like Berkeley are set to face national funding cuts and others, like Austin, are struggling to support their cultural civic assets (music venues)

WHAT CHANGED?

Neighbourly, a platform for individual investors to search municipal bonds, was set up to create opportunities for citizens to earn individual returns on investments that help their cities. Two examples:
- Berkeley's project to use block-chain (to drive efficiencies)
- Austin's proposed $12 million issuance to help existing creatives purchase their current spaces before they can be priced out.

WHY IS IT IMPORTANT?

Berkeley - Block-chain has the potential to drastically reduce the administrative costs of issuing bonds
Austin - Using public capital in oblique ways, to support our intangible economy, could help to ensure affordability and innovation

#D.05

LEEDS NEIGHBOURHOOD SHARES

Creating opportunities for collective citizen financing of local neighbourhood projects through neighbourhood shares

LOCATION
Leeds, UK

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: Community, Organisation (Ethex)

RELEVANT RESEARCH
In Canada, community bonds - interest-bearing bonds intended for small scale, non-accredited investors and can only be issued by a non-profit organization - have been used see [43]

WHAT WAS THE PROBLEM?

Neighbourhood members lack the infrastructure to pool their capital to invest directly in trust-worthy, socially beneficial (and profitable) projects in their neighbourhood.

WHAT CHANGED?

A suburb launched the UK's first local investment fund - with a low threshold of £200/ share, and revenue to be generated through affordable housing - on ethical investment platform Ethex. Revenue will be generated through projects such as affordable housing.

WHY IS IT IMPORTANT?

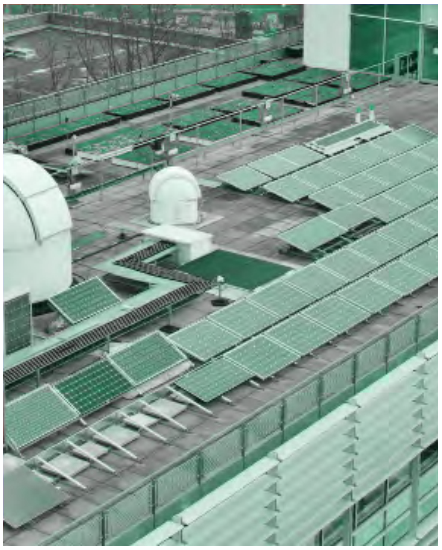
Although funding a one-off local project is not innovative, this provides a trusted concept model for making investment in one's neighbourhood profitable - through the aggregation of projects - as well as enabling people to have a say in how their money is spent.

DEMOCRATIZED FINANCING

#D.06

RES-COOPS

Governing, and financing, renewable energy generation through direct citizen investment through co-operatives



LOCATION
Europe

YEAR
1990s

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Civic: Individuals & communities

RELEVANT RESEARCH
Numerous examples of neighbourhood owned energy assets (e.g. geothermal heating in Montreal)

WARNING
Complementary currencies need to reach critical mass to make a difference

WHAT WAS THE PROBLEM?

In some cases private capital for renewable energy generation is not forthcoming, and even when it is, there are vast difference in project outcomes depending on where that cash comes from - with more social benefits from citizen investment (even though that is not always recognised in the tendering process).

WHAT CHANGED?

REScoops set up a learning portal to enable the financing of energy projects via direct citizen contributions - where citizens become local shareholders, and actively participate in the investment decisions as well as setting energy price.

WHY IS IT IMPORTANT?

This trust-worthy, model (with backing from evidence) has helped to provide best practices and catalyse public tendering change e.g. East Flanders encourages at least 20% direct citizen participation.

#D.07

BUILDING SOCIETIES

Financing housing construction through community managed pooled assets or 'credit unions'

LOCATION
Birmingham

YEAR
1775

STAGE OF IMPLEMENTATION
Established

ACTORS
Civic: Individuals

WHAT WAS THE PROBLEM?

Industrial revolution Birmingham was experiencing rapid urbanisation, with vast wealth creation, yet a lack of financing models for house-building (as mortgages were not yet widely available).

WHAT CHANGED?

These 'building societies' - often set up in taverns - allowed members to pay a monthly subscription to a central pool of funds. This pool of funds was used to finance members' houses building (decided through a lots system) - with the built houses acting as collateral to attract further funding

WHY IS IT IMPORTANT?

This model exemplifies how innovative approach to collective interest financing can help to build access to finance, and drive housing supplies.

WARNING
Credit unions are struggling across Europe, with debtees prioritising paying off pay-day loans

#D.08

SARDEX

Accelerating access to capital, by disrupting who gets to issue money through a new B2B currency operating through mutual credit

LOCATION
Italy

YEAR
2008

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Private: Local businesses

WHAT WAS THE PROBLEM?

During the financial crisis, businesses in Sardinia were unable to secure credit - leading to a cascade of negative impacts as companies folded, unemployment rose.

WHAT CHANGED?

Small businesses got together to issue money as credit to each other, in order to create liquidity. Everyone starts from zero in the system, and then go into and out of short-term debt to one another by either receiving —which creates a future obligation owed—or by offering goods and services to people on the system.

WHY IS IT IMPORTANT?

Local money becomes a series of rights and duties, encouraging local spend and capping speculation and debt - companies may go into debt only up to a certain limit - democratizing who gets to issue money. Currently, more than 1 million € in circulation.

WARNING
Complementary currencies need to reach critical mass to make a difference

#D.09

FIRST NATIONS MARKET HOUSING

Delivering mortgage loans for residents of indigenous communities through risk-adjusted targeted bonds

LOCATION
Canada

YEAR
2018

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Private: banks
Public: government
Third: foundations

RELEVANT RESEARCH
Many organistions have great resources online regarding creditworthiness & impact investing including Global Impact Investing Network or Rockefeller Foundation

WARNING
While this approach helps democratize lending and home-ownership, this in turn can lead to unintended consequences (e.g. unaffordability down the line)

WHAT WAS THE PROBLEM?

Housing conditions on First Nations reserves in Canada are often deplorable, with many communities living without access to safe water and basic services. Part of the problem is the lack of tenure security that residents have, without access to land title or mortgage loans.

WHAT CHANGED?

To build the market for home ownership, this $50 million fund is being set up to provide the security to stimulate a market for indigenous homeowner loans (for acquisition, construction & renovation). The terms of the loans will be adapted for indigenous communities, and guarentees are being used to leverage private capital, through risk-adjusted return bonds to private investors.

WHY IS IT IMPORTANT?

Philanthropic capital is being used as a tool to leverage private capital, with social finance being used to adjust the risk calculation that private investors make. This aims to overcome the barriers that our system of lending puts up for Indigenous people in Canada. economically,

DEMOCRATIZED FINANCING

D.10

WILD HEARTS' CHARITY

Creating funds for micro-finance loans by supplying stationary to large business clients

WHAT CHANGED?

WildHearts Office enables large corporate clients - such as Deloitte, Johnson & Johnson, Zurich, Amey and Serco - to drive impact through their supply chain. By purchasing stationary from WildHearts, rather than another supplier, capital is used to finance micro-loans globally and social mobility projects across the UK. So far the business model has unlock £7 million and impacted 300,000 lives

LOCATION
UK

ACTORS
Third

DEMOCRATIZED FINANCING

D.11

FRESHWORKS

Widening access to health food via tax incentives & credit enhancement

WHAT CHANGED?

Fund comprising 'New Market Tax Credits' to spur private sector investment by providing a tax credit to corporate or individual investors who make equity investments in 'Community Development Entities' - these in turn provide loans and grants to food retailers that offer affordable, healthy food in communities where options are scarce.

LOCATION
USA

ACTORS
National Govt.
Private

DEMOCRATIZED FINANCING

D.12

SOLARCOIN

Democratizing the future energy economy through energy-backed-cryptocurrencies

WHAT CHANGED?

An alternative digital currency that works like air-miles for Solar electricity generation. SolarCoin is claimed by individuals living in homes with solar panels on their roof or commercial solar electricity producers. The goal is to provide an incentive to produce more solar electricity globally by rewarding the generators of solar electricity.

LOCATION
Global

ACTORS
Private

DEMOCRATIZED FINANCING

D.13

SOLON'S SHARING ECONOMY INSURANCE

Democratizing access to mobility through a sharing economy insurance product

WHAT CHANGED?

Setting up local co-operatives with the ability to hold small civic assets, such as cars... with a new insurance product With a major credit unit, developed an insurance product that enables residents to co-own and share small assets such as cars, and light trucks.

LOCATION
Canada

ACTORS
Credit Union
Company

DEMOCRATIZED FINANCING

D.14

IMPAK.COIN

Growing the impact economy through a new crypto-currency

WHAT CHANGED?

A currency that can only be used for P2P lending to accredited companies, or to buy products/ services from these accredited companies - simplifying due diligence and allowing earning of interest - the business model is supported through users (coin holders and companies) data sales to interested parties.

LOCATION Canada

ACTORS Civic & private

DEMOCRATIZED FINANCING

D.15

WARA

Driving local economy through increased circulate of complementary currency with demurrage fees

WHAT CHANGED?

In 1926, after the first world war, this town created its own banknotes with a demurrage-fee (holding the money had a cost fee of 1% of nominal value) - preventing people from storing it - and receiving a discount for using it. As a result, new jobs were created - ended when the finance ministry of the Reich forbade the experiment which resulted in loss of jobs and economic downfall in the area.

LOCATION Germany

ACTORS Civic

DEMOCRATIZED FINANCING

D.16

UJIMA COMMUNITY CONTROLLED FUND

Tackling poverty through a patient capital fund, a certification & an alternative local currency

WHAT CHANGED?

This multi-pronged approach will include a fund of pooled investment (from communities, local businesses etc.) to leverage additional capital from pension funds, foundations etc. Investments will be made democratically through votes (not proportional to value invested)

LOCATION USA

ACTORS Civic

DEMOCRATIZED FINANCING

W

BLOX'S TENANT ENGAGEMENT

A platform to harness collective bargaining power of tenants in the purchasing of utilities

WHAT CHANGED?

This offline community engagement platform, at the concept stage, is focused on creating the means for tenants of social housing to group together and purchase utilities collectively in order to get the best deal. The aim is that this mode of organising will help provide psychological ownership of tenants, and grow their social capital.

LOCATION Global

ACTORS Civic

DEMOCRATIZED FINANCING

D.18

STEEM.IT - TIME BANKS S.0

Enabling people to convert time to cash - through a co-operative social media platform

WHAT CHANGED?

The minimum costs to participate in the blockchain economy are overwhelming for many - therefore this social media platform concept allows people to 'buy-in' (converting fiat currency) or 'work-in' (get paid tokens for content)- boot-straping value through mutual exchange facilitated by a fair accounting/currency system.

LOCATION USA

ACTORS Civic

DEMOCRATIZED FINANCING

D.19

COPOWER'S MICRO-GREEN BONDS

Democratizing access to green investments through a crowd-lending platform

WHAT CHANGED?

CoPower partners with energy efficient development firms to finance small scale projects that enable the greening of existing infrastructure e.g. LED retrofits, or residential geothermal through micro green bonds on their platform for retail investors

LOCATION Canada

ACTORS Civic & private

DEMOCRATIZED FINANCING

D.20

SUN EXCHANGE - MICRO-LEASING SOLAR

Making distributed energy production affordable through a lease model & crypto-currency

WHAT CHANGED?

The Sun Exchange model crowd-raises funds globally solar cells and lease them to schools and businesses in the sunniest places on Earth e.g. Africa on a monthly lease rental collection model, with transparency & trust from the block-chain payments. This model allows both low threshold investment, and access to energy generation for those without upfront capital

LOCATION Global

ACTORS Private

DEMOCRATIZED FINANCING

D.21

DATAVEST DATA FUNDS

Monetizing individuals data through a user-owned marketplace

WHAT CHANGED?

A user-owned marketplace for personal data. Its consumer app, which will allow individuals to earn a new digital currency by investing anonymized data in data funds - companies can pay to subscribe to data funds such as 'Purchase History' or 'Location Data', allowing individuals to directly participate in the current and future economic value of their data.

LOCATION USA

ACTORS Civic & private

DEMOCRATIZED FINANCING

D.22

ROBIN HOOD CO-OPERATIVE

Democratizing algorithmic trading for the many to deliver social benefits

WHAT CHANGED?

An investment fund which invests through an algorithm called "Parasite" which tracks automated transactions (which accounts for 75 % of exchanges on the US exchange). Profit generated (after members dividends) is spent on socially beneficial projects through a co-operative decision-making model. Although this fund is more of a 'stunt' - it provides an inspiring example of how people can access investment opportunities and challenge the status quo of the finance sector.

LOCATION Finland

ACTORS Civic

DEMOCRATIZED FINANCING

D.23

CSI'S COMMUNITY BONDS

Funding the asset acquisition of a civic group through community bonds

WHAT CHANGED?

In 2014, Centre for Social Innovation issued $2M through community bonds – interest-bearing loans that allow not for profits to raise funds from their community to go towards the purchase of a 64,000 sq. ft. building at 192 Spadina Avenue. In the end, $4.3M from 227 investors, allowing the centre to purchase a building.

LOCATION Canada

ACTORS Civic

DEMOCRATIZED FINANCING

D.24

SDI'S COMMUNITY SAVING GROUPS

Democratizing access to savings by creating joint liability savings groups

WHAT CHANGED?

The rise of networked savings groups of vulnerable poor (for example as promoted by Slum Dwellers International) provide access to credit not as a means in itself, but to stimulate urban transformation e.g. education. These groups require all members to actively participate in the collection, banking and auditing of savings and loans, offering low-income urban residents an opportunity to develop their understanding of finance

LOCATION Global

ACTORS Private

DEMOCRATIZED FINANCING

D.25

SPACEHIVE

Shifting public understanding of value-creation through crowd-funding website

WHAT CHANGED?

A website where people with project ideas can build support from their community, ensure their plans are viable, pitch for funding from the crowd and partners at the same time, and well as share the impact they've created. Having this platform provides legitimacy to projects, and therefore encourages municipal government to invest in these local projects - shifting the mindset of local authorities.

LOCATION UK

ACTORS Civic & public

TRANSPARENT GOVERNANCE

Societies and economies that keep most people in the dark tend to go off the rails because corruption and money-laundering are a drag on economies.

B-team,
Certification organisation

#T.01

PARIS PARTICIPATORY BUDGETING

Growing citizen engagement, and bringing transparency to fiscal policy through participatory budgeting

LOCATION
Paris, France

YEAR
2014

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: Municipal Government
Civic: citizens

WARNING
Porto Allegre has since ended their Participatory Budget

WHAT WAS THE PROBLEM?

Centralised decision-making can lead to poorer decisions (based on one size fits all approaches) and growing alienation of citizens. This, combined with the growing complexity of urban problems and the desire for more localised responses, can lead to a host of challenges including lack of social cohesion, ineffective use of public resources and deprived neighbourhoods.

WHAT CHANGED?

Between 2014 and 2020, Paris committed to reserving €500 million (about 5% of the city's capital fund) to be spent through participatory budgeting - where districts decide on projects through an online vote

WHY IS IT IMPORTANT?

Participatory budgeting is seen as a way to break down political divisions, drive citizen engagement and provide better, locally-tailored projects. While globally they have been implemented with varied levels of success, this one sets a new scale in terms of participation and budget - allowing for a new scale of thinking & innovation.

#T.02

REGULATION - ARTICLE 173

Ensuring Environmental-Social-Governance (ESG) compliance by regulating institutional investors

LOCATION
France

YEAR
2016

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: National Government
Private: Asset owners & institutional investors

WARNING
Due diligence of ESG compliance is not always accurate

WHAT WAS THE PROBLEM?

Although there is a widespread growth of Environment-Social-Governance Responsible (ESG) investing, this is mostly voluntary with many mass share holding institutional investors not considering the risks of poor compliance on their portfolio.

WHAT CHANGED?

France is the first country to require asset owners (e.g. institutional investors) and investment managers to disclose climate-related financial risks and report on how ESG criteria are considered in their investment decisions.

WHY IS IT IMPORTANT?

This shift in governance, through a legislative changes, helps to mainstream an existing trend - for investors to consider their impact on the world - and try to mitigate against investors paying lip-service to this without institutionalising it in their capital decision-making processes.

#T.03

CAPITALUSM POOLING OF SHARES

Holding companies to account through large scale activism by providing a platform to aggregate small shareholders shares

LOCATION
UK

YEAR
2016

STAGE OF IMPLEMENTATION
Concept

ACTORS
Civic: Organisation (Capitalusm)

WHAT WAS THE PROBLEM?

Even though 60% of the Stock Market is owned by 61% of households - only shareholders who hold over 3% of shares can vote in corporate decisions.

WHAT CHANGED?

An online platform allowing fractional shareholders to collaborate and harness their collective bargaining power, in order to have a real say in the way companies are run - revolutionizing practices such as writing to the board to get items on the agenda e.g. CEO's pay, sustainable supply-chains, or minimum wage.

WHY IS IT IMPORTANT?

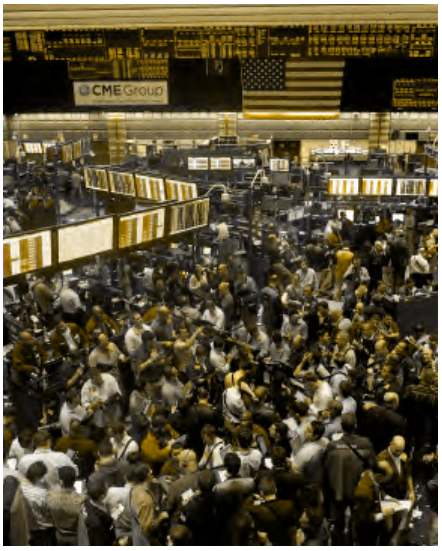
This platform demonstrates how the 'democratizing' potential of the internet can help widen the scope of influence of social and civic actors.

WARNING
Communication is key: Limited uptake of the approach due to limited awareness

#T.04

LUX GREEN, SUSTAINABLE & SOCIAL EXCHANGE

Mainstreaming transparent, impact investments through a block-chain enabled exchange



LOCATION
2018

YEAR
Luxembourg

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Private: investors

WARNING
While important, market response is not likely to be sufficient

WHAT WAS THE PROBLEM?

Although there is increased interest in impact and responsible investing, green bonds are still only 1% of the total debt market. Reasons for this include the lack of trust-worthy, transparent opportunities and limited awareness on the performance of these sustainable investment products - with many not knowing you can 'do well by doing good'.

WHAT CHANGED?

Luxembourg Exchange (which currently lists 50% of the worlds green bonds) set up specific windows where issuers are required to disclose on the use of proceeds and commit to regular reporting. All documents are free and use Ethereum (blockchain-based protocol) to ensure transparency.

WHY IS IT IMPORTANT?

This sort of essential, transparent and scalable infrastructure helps to mainstream the trend for sustainable investments.

#T.05

BENEFIT CORPORATIONS & B-CORPS

Mainstreaming new standards of corporate responsibility by a legislative change to widen fiduciary duty

LOCATION
USA

YEAR
2010

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Public: Federal government
Private: For-profit, social mission organisations.

WARNING
Concern that Benefit Corporations are no more effective than traditional Corporate Social Responsibility

WHAT WAS THE PROBLEM?

Companies that were certified as 'B-Corps' (a certification to denote a company as having social and environmental values) were struggling to act with their multi-value mission in mind. This was especially when raising capital, as investors expected them (as for-profit companies) to respect their fiduciary duty to maximize profit for benefit of shareholders.

WHAT CHANGED?

A new corporate law legislation set up a new type of legal entity - a 'Benefit Corporation' - which (in addition to profit) has a legally defined goal to beneficially impact society. In theory, it allows directors to consider non-financial interests when making decisions without fear of breaching any fiduciary duty to shareholders.

WHY IS IT IMPORTANT?

Innovation in corporate law changed the legal infrastructure so that companies stay mission driven through capital raises, institutionalizing the values - as well as providing a clear signal to the market and raising awareness with other companies

#T.06

BUEN VIVIR'S IMPACT FUND

Co-defining impact investing through a new investment fund governance structure

LOCATION
Global

YEAR
2018

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Impact investors

WHAT WAS THE PROBLEM?

While impact investment often has the best intentions, it often fails to lead to a truly transformative approach, as it preserves the standard power imbalance between investor and 'beneficiary'. Where the latter has limited agency in designing the process

WHAT CHANGED?

Rather than those with the money imposing terms, this investment model starts with the lending practices developed by grassroots groups themselves. Application to the loan fund involves the same 'fund application process' (regardless of what your role in the fund is) to demonstrate commitment to the fund's mission. Other practices include that the borrowers commit contributions as they grow rather than meet investor-set interest rates

WHY IS IT IMPORTANT?

It changes the narrative from investor/ beneficiary to members - where all members are chosen because of their commitment to the mission for delivering a transformative approach.

WARNING
So far only committed 500,000 $

#T.07

ETHERISC

Disrupting the insurance industry through open, smart contracts on a distributed platform

LOCATION
Germany

YEAR
2016

STAGE OF IMPLEMENTATION
Pilot

ACTORS
Civic: Distributed organisation
Private: Reinsurers

WHAT WAS THE PROBLEM?

The insurance industry is plagued by misalignments of interests between different stakeholders, and therefore requires excessive regulation to ensure that no party benefits disproportionately - meaning that many people are excluded from the insurance system.

WHAT CHANGED?

The first fully-licensed, decentralized insurance where payouts are automated. Products include automated flight-delay policies, hurricane and crop insurance and developing P2P mini-insurance e.g. Specialty Property & Casualty Lines for sub $10 premiums.

WHY IS IT IMPORTANT?

Drastic cost reductions, and open source approach, will enable mass innovation.

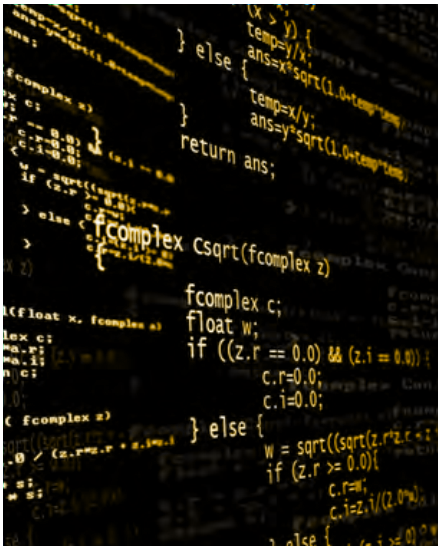
WARNING
P2P insurance & lending often leads to high levels of civic liabilities

TRANSPARENT GOVERNANCE

#T.08

OASIS OPEN-SOURCE LOSS MODEL

Unlocking joint-risk management through shared data infrastructure that improves insurance modelling



LOCATION
Global

YEAR
2015

STAGE OF IMPLEMENTATION
Scaling

ACTORS
Private: Insurers, risk-modellers

WHAT WAS THE PROBLEM?

Catastrophe models, usually from one source, are useful to understand risk, yet the real life complexity of the issue requires multiple view points as well as rapid updates and iterations.

WHAT CHANGED?

Oasis is a not for profit, insurance industry-owned catastrophe modelling platform - which offers all components of the model (hazard, vulnerability, damage and insured loss) open source and downloadable from GitHub, free of charge.

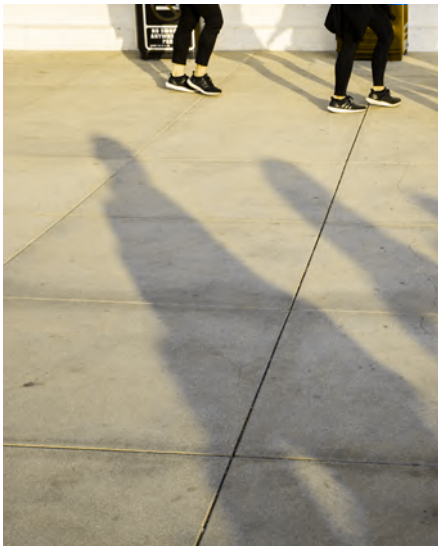
WHY IS IT IMPORTANT?

The non-proprietary, open source approach helps to reduce the cost of models as well as allowing developers to interact (accelerating innovation) and for insurers to gain access to insights rapidly.

#T.09

VANCITY'S FAIR & FAST LOANS

Disrupting the payday lending market with affordable, convenient and flexible loans



LOCATION
Canada

YEAR
2014

STAGE OF IMPLEMENTATION
Established

ACTORS
Private: Credit Unions, members

WHAT WAS THE PROBLEM?

Residents of British Columbia were resorting to high-fee, high-interest payday loans at a higher rate per capita than residents of other Canadian provinces. Many borrowers were unable to re-pay their total loan amounts within the 62-day maximum term, and took out more loans to repay the original amount, leading some into perpetual cycles of debt.

WHAT CHANGED?

Vancity created a flexible payday loan alternative that allows borrowers to access up to $2,500—in person or online--in as little as 10 minutes. Borrowers have up to two years to repay their loans, and they know exactly what they will pay in interest; there are no hidden charges or extra fees.

WHY IS IT IMPORTANT?

Predatory lending practices have spread quickly across Canada, and in B.C. especially. Research demonstrates that a majority of payday loan borrowers are the "working poor," living at or below the poverty line. Vancity's Fair & Fast loan program disrupts the payday model while helping those who require a low-cost, hassle-free loan in case of an unexpected event or emergency.

TRANSPARENT GOVERNANCE

T.10

APEX SHARED DATA INFRASTRUCTURE

Driving transparent, and cross-silo, government operations through inter-departmental open data sharing

WHAT CHANGED?

APEX is a whole-of-government platform which establishes common application programming interfaces (APIs) that allow public agencies to share data with other agencies and private entities.

Estonians have rejected the idea of merging all information into one centralised government database so that government officials can see only what they request

LOCATION Singapore

ACTORS National Govt.

TRANSPARENT GOVERNANCE

T.11

RE-WILDING EUROPE

Debt-financing for re-wilding companies, through a targeted transparent revolving fund

WHAT CHANGED?

The first 're-wilding enterprise' funding facility that provides loans to business that catalyse, support and achieve positive environmental and socio-economic outcomes that support rewilding - to date 18 enterprises (from wildlife viewing hides to wildlife breeding centres) have been supported with loans that they pay interest on & rewilding levies.

LOCATION UK

ACTORS Civic

TRANSPARENT GOVERNANCE

T.12

TRIODOS AND CHARITY BANKS

Socially responsible banks which provide transparent lending practices

WHAT CHANGED?

Triodos bank, with 680,000 clients across Europe and US, differentiates itself by only investing in businesses that are judged to be of social or ecological benefit as well as publishing details of their lending practices (e.g. businesses, amount etc.)

LOCATION Netherlands

ACTORS Private: banks

TRANSPARENT GOVERNANCE

T.13

90-10 SOLIDARITY LABEL

Driving socially impactful savings schemes through transparency & regulation change

WHAT CHANGED?

France introduced this regulation which requires companies to offer employees access to savings funds schemes which invested 10 percent of their capital in organisations with a quality assurance label - 'solidarity label' - administered by French municipal authorities.

LOCATION France

ACTORS National Govt.

TRANSPARENT GOVERNANCE

T.14

AKI ENERGY INC. IMPACT BOND

Bringing flexibility, and democratic decision-making into Social Impact Bonds (SIB)

WHAT CHANGED?

An impact bond focused on installing geothermal assets in Indigenous communities in Northern Manitoba. What is different from other SIBs is that there is a flexible process around defining outcomes, which are defined by the communities (beneficiaries) and not by the outcome buyer

LOCATION
Canada

ACTORS
Civic

TRANSPARENT GOVERNANCE

T.15

BLOCK-CHAIN CARBON CREDITS S.0

Better systems for trading priced externalities using the block-chain to support 'high quality' credits

WHAT CHANGED?

IBM is investing in the "tokenization" of carbon offset credits using the Block-chain in order to overcome complexities of purchasing carbon credits e.g. concerning lack of transparency around quality of the credits & cumbersome, expensive due diligence.

LOCATION
Global
2018

ACTORS
Private: insurance

TRANSPARENT GOVERNANCE

T.16

UKRAINE'S PRO-ZORRO

Reducing corruption in public procurement through an open e-procurement protocol

WHAT CHANGED?

Anti-corruption activists, with businesses and government developed a platform where public agencies could exchange and sell, in an open way so citizens see who and what deals were being made. ProZorro's hybrid model allows collaboration between the central database and infinite number of commercial marketplaces, widening access

LOCATION
Ukraine

ACTORS
Civil society
Businesses
Govt.

TRANSPARENT GOVERNANCE

T.17

TESLA IN ADELAIDE

Delivering 50,000 solar panels through a PPP and large-scale 'rent a roof' scheme to deliver solar panels

WHAT CHANGED?

Tesla is installing 50,000 solar panels free of charge across Adelaide - being financed by the sale of electricity (tenants or homeowners do not own the panels). This investment is funded through a $2 million taxpayer-funded grant and $30 million loan from the government 'Renewable Technology Fund' (which Tesla will repay through energy sales)

LOCATION
Australia

ACTORS
Municipal Govt.

TRANSPARENT GOVERNANCE

T.18

VANCITY'S SHIFT FROM SPONSORSHIP TO PARTNERSHIP

Moving from transactional to transformational ways of working together

WHAT CHANGED?

Vancity and Pacific National Exhibition (PNE) operate under a partnership model, based on co-creating solutions around shared goals. Together, they created an on-site zero waste program to green the fair (designing sorting, hauling, communications and logistics) and provide local binners with employment as on-site experts, educating fair-goers on proper waste sorting. This partnership now runs year round with expanded activities.

LOCATION Canada

ACTORS Private

TRANSPARENT GOVERNANCE

T.19

INVESTOR CONFIDENCE PROTOCOL

Drive investor confidence in energy retrofits through standardization

WHAT CHANGED?

An online network which develops protocols for standardization and best practices sharing for energy retrofits. Investment opportunities include 3rd party verification, to create the transparency and risk reduction necessary for investor confidence, as well as impact measurement and underwriters.

LOCATION Global

ACTORS Private

TRANSPARENT GOVERNANCE

T.20

INDEX INSURANCE

Creating financial access and cost-optimization, through transparent, real-time insurance

WHAT CHANGED?

Weather Index Insurance automates insurance pay-outs based on weather monitoring. It allows for rapid pay-out to mitigate the worst damages, and reduce fraudulent claims - with cutting-edge technology improving indices (e.g. evapotranspiration, soil moisture, heat stress etc.)

LOCATION Various

ACTORS Private

TRANSPARENT GOVERNANCE

T.21

SOCIAL STOCK EXCHANGE (SSX)

Connecting investors with sustainable ventures through an online platform

WHAT CHANGED?

An online platform launched to help companies that deliver a social impact to connect with investors and unlock capital. All companies must meet a rigorous set of criteria before joining, including the publication of an independently verified Impact Report. SSX has since become a licensing entity - meaning that they are responsible (and have authority) to license companies on their exchange.

LOCATION UK

ACTORS Private

TRANSPARENT GOVERNANCE

T.22

CO-POWER'S REVOLVING LOAN FUND

Financing clean energy through a transparent shared credit facility that can help overcome time lags in funding

WHAT CHANGED?

In the face of capital time-lags (between provision and project readiness), Co-Power developed a $ 4 million segregated special purpose entity, with an expected 5% return to act as a revolving loan fund that channels debt capital to selected projects.

LOCATION Canada

ACTORS Civic & Private

TRANSPARENT GOVERNANCE

T.23

AVIVA'S AUTO INSURANCE DRIVE CAM

Incentivizing risk self-management through technology enhanced transparency (and insurance premiums)

WHAT CHANGED?

The 'Aviva Drive' smartphone app rates driver behaviour and provides discounts to safer, more fuel efficient drivers, increasing access to insurance and encouraging responsible driving. A dashcam records videos for claims, ensuring a transparent system.

LOCATION UK

ACTORS Private

TRANSPARENT GOVERNANCE

T.24

SANTA MONICA'S TINDER FOR CITIES

Driving citizen engagement through transparent feedback mechanisms for city decisions

WHAT CHANGED?

Local government have developed a digital tool modelled on a dating app - where they can gauge public opinion on everything from street furniture to parking. CitySwipe presents local residents with images of potential scenarios and simple yes/no questions - making the consultation process effortless, compared with the usual feedback mechanisms.

LOCATION USA

ACTORS Municipal Govt.

TRANSPARENT GOVERNANCE

T.25

COMMUNITY-BASED PPP (CBP3)

Meeting public, private & community stormwater needs through a transparent framework

WHAT CHANGED?

The Prince George's County Clean Water Partnership (CWP), initiated as a demonstration pilot of a CBPT. This is a type of Private Public Partnership, where the government and private sector work with a community based advisory board in order to help communities meet their stormwater needs e.g. through local community delivery of projects.

LOCATION USA

ACTORS Municipal Govt.

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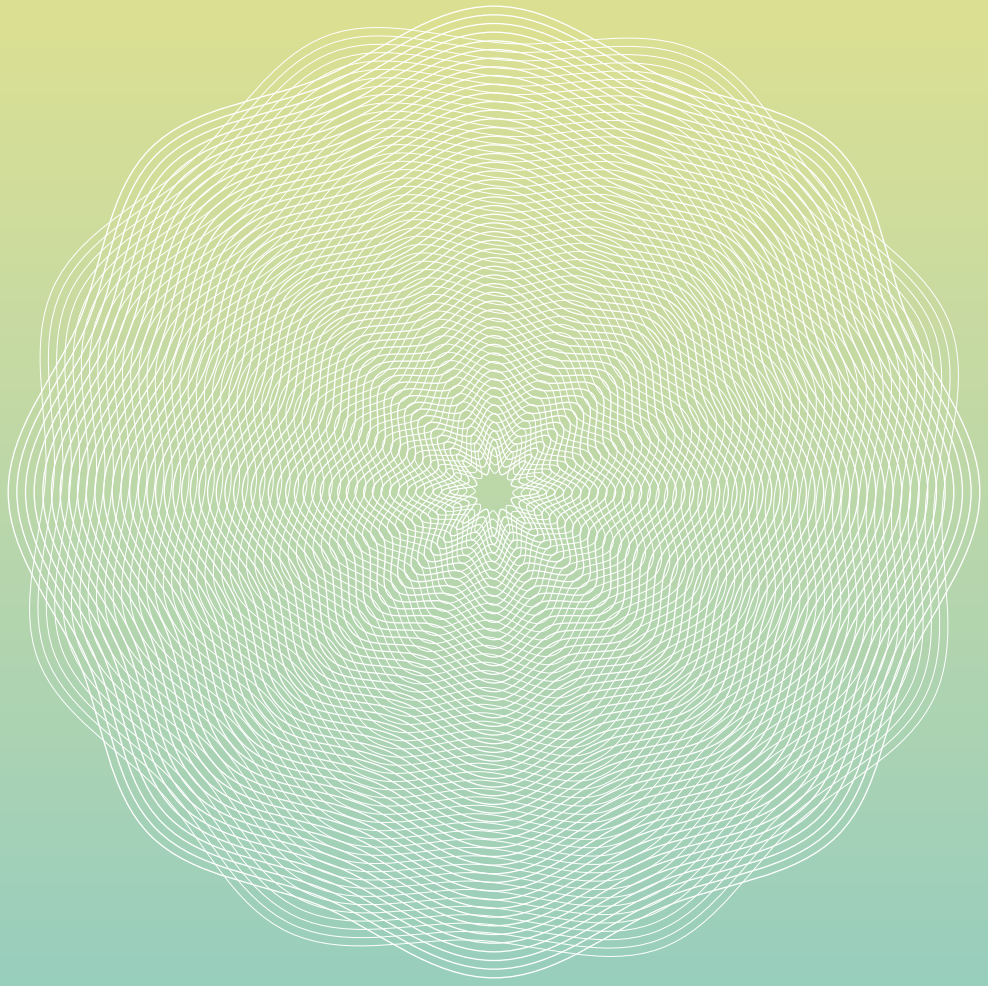

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