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Financing infrastructure and built environment adaptation to climate change

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Financing adaptation



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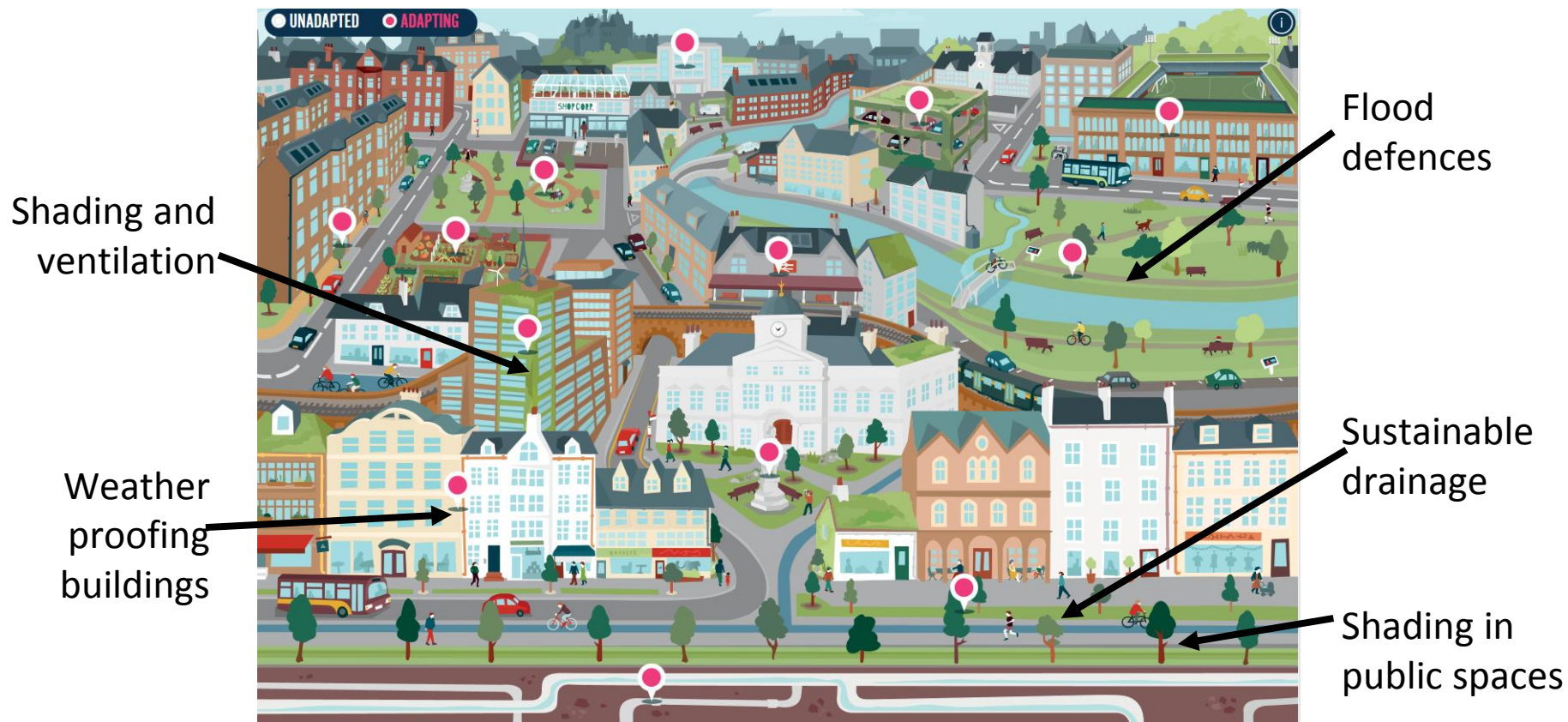
- What do we mean by adaptation?
- What do we mean by finance?
- What's the problem with current finance?
- What alternatives are available?
- What can we do to improve access to alternatives?



Adaptation actions and projects



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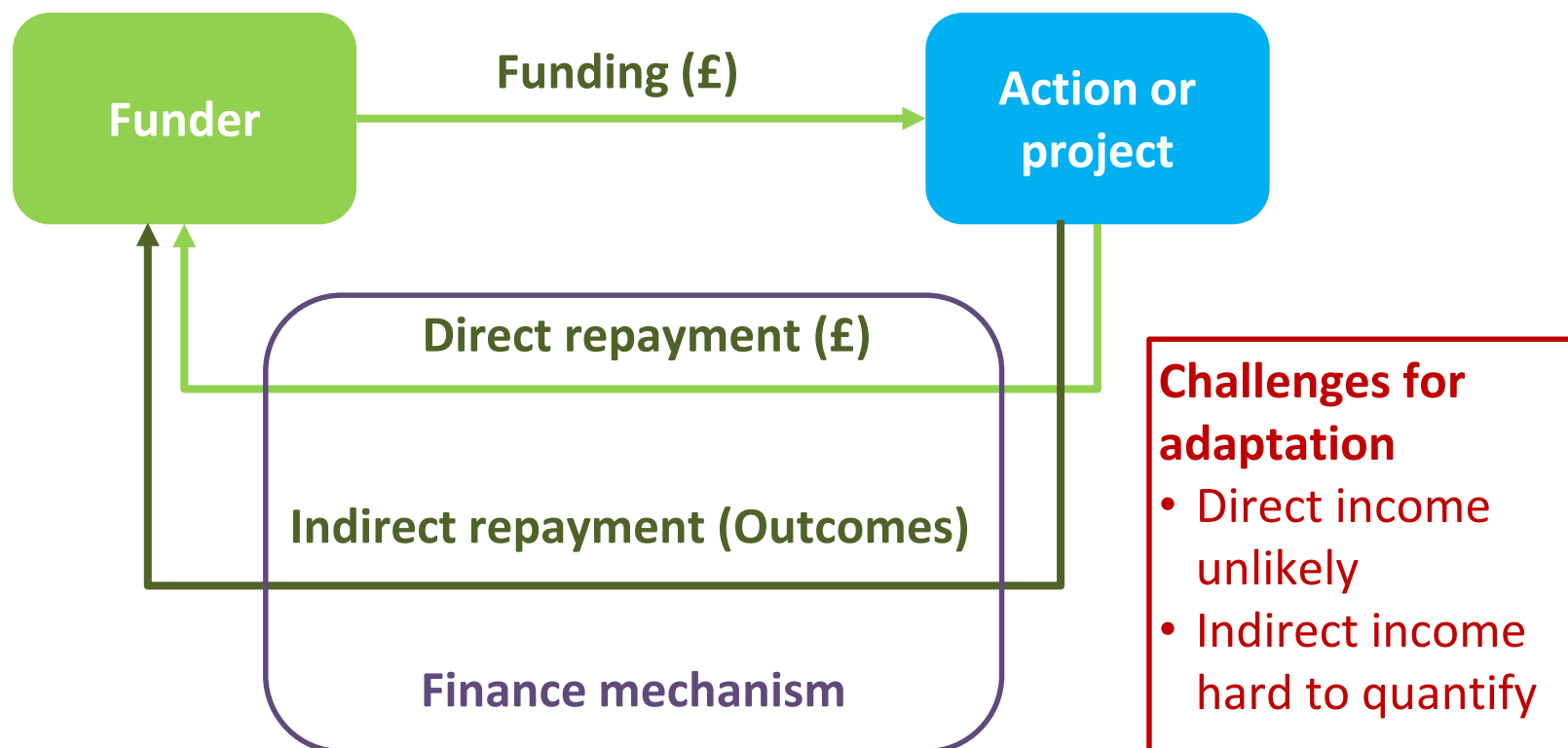
<http://sniffer.clients.madebyfieldwork.com/?v=6>

Infrastructure, built environment and the public sector



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Type of infrastructure	Agencies/ Utilities	Local authorities	Third sector/community	Potential outcomes
Core infrastructure	<ul style="list-style-type: none"> E.g. Drainage and landslide protection on trunk roads, rail network. 	<ul style="list-style-type: none"> 'Hard' Flood Risk Management infrastructure. 	<ul style="list-style-type: none"> Local energy generation and storage to reduce disruption during storms. 	<ul style="list-style-type: none"> Reduced disruption Reduced repair costs. Increased community resilience.
Retrofit of built environment and public realm	<p>Retrofit to increase resilience of own buildings and ensure contribution to resilience e.g:</p> <ul style="list-style-type: none"> Retrofit blue and green infrastructure to any public realm (street trees, SUDS, permeable surfaces). 		<ul style="list-style-type: none"> Retrofit to increase resilience of own buildings and ensure buildings contribute to resilience. 	<ul style="list-style-type: none"> Reduced energy use and carbon emissions. Health and wellbeing Increased property values. Increased economic activity.
New built environment and public realm	<ul style="list-style-type: none"> Green and blue infrastructure included as 'core infrastructure' rather than add-on. 		<ul style="list-style-type: none"> Allotments and green space provided for community use. 	
Green infrastructure	<ul style="list-style-type: none"> Purchase of land and compensation to enable Natural Flood Risk Management and managed realignment or retreat at coast. 		<ul style="list-style-type: none"> Property level flood protection. 	<ul style="list-style-type: none"> Biodiversity benefits. Water quality improvements.



The challenge of current finance



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Current finance mechanisms

- Capital grants
- User charges
- Public Works Loan Board
- Grant funding

Challenges of current finance mechanisms

- Fiscal austerity
- Exclusion of adaptation
- Lack of guidance for grant funds
- Partnership working

Alternative finance



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Revenue financing

Crowd-source funding

Bonds

Investment Funds

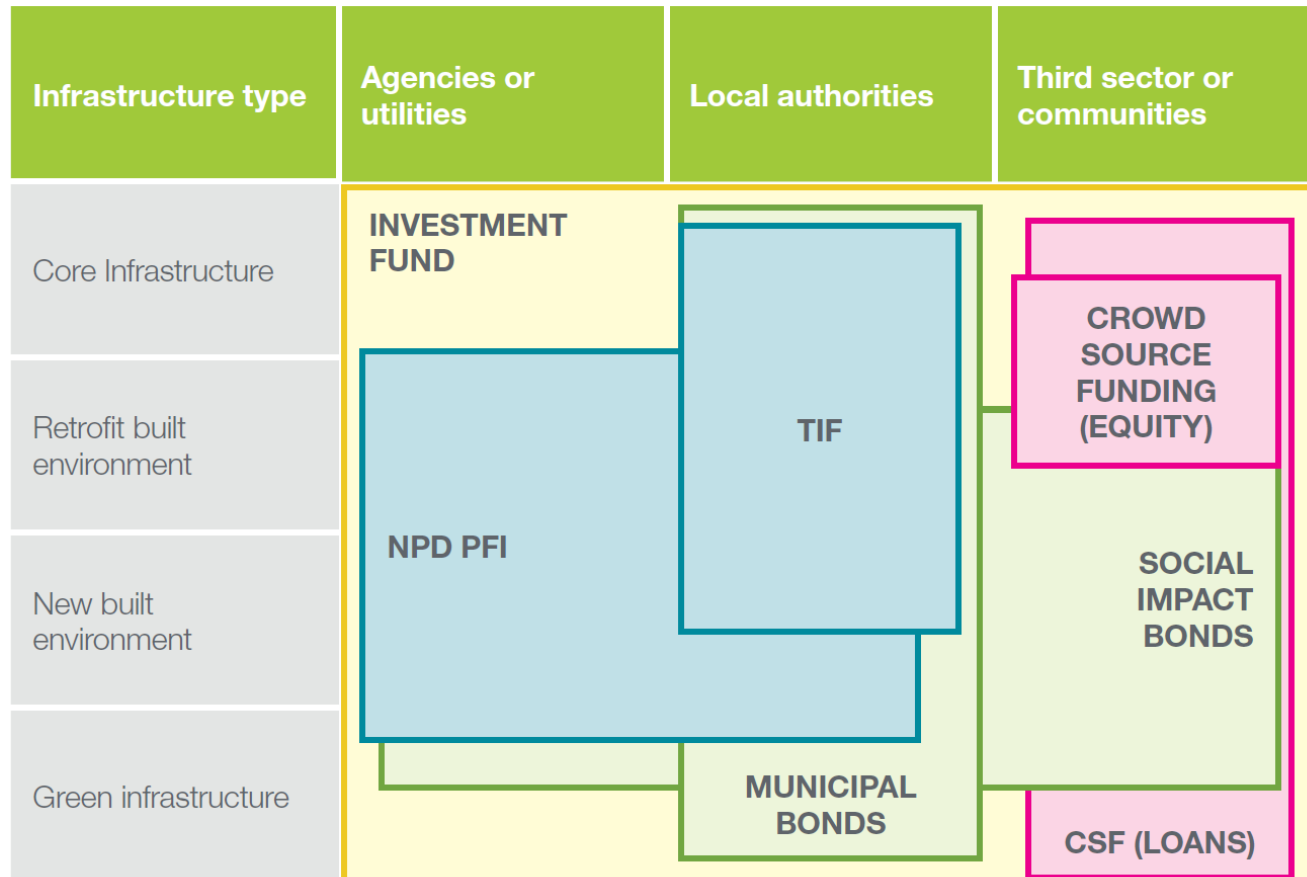
Possible advantages

- More relevant to scale
- Some are established
- Some account for multiple outcomes
- Many have wider benefits – economic activity, investor awareness, engaging people

Horses for courses



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Key

■ Revenue financing
 ■ Crowd source funding
 ■ Bonds
 ■ Investment funds

Key barriers to accessing to finance



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Barrier

Barriers to specific mechanisms:

limits to role of public sector organisations; complexity in setting up nascent mechanisms; lack of focus on adaptation in climate change funding and support.

Barriers to financing multiple outcomes:

social and environmental outcomes, which may occur in the long-term, are hard to articulate and harder to quantify so are often excluded from finance mechanisms.

Barriers to partnership working:

Balancing motivations, processes and timescales of multiple organisations is time consuming and costly.

Improving access to finance



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Barrier	Responses that could be implemented immediately	Responses that require legislative or policy change
Barriers to specific mechanisms: limits to role of public sector organisations; complexity in setting up nascent mechanisms; lack of focus on adaptation in climate change funding and support.	<ul style="list-style-type: none">• Develop investment readiness tools for adaptation actions.• Include adaptation as a core objective in existing funding e.g. Climate Challenge Fund and ERDF	<ul style="list-style-type: none">• Give general power of competence to Scottish local authorities.• Finance feasibility and pilot work and standard documents for social impact bonds, non-profit distributing models and tax incremental financing.

Improving access to finance



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Barrier	Responses that could be implemented immediately	Responses that require legislative or policy change
Barriers to financing multiple outcomes: social and environmental outcomes, which may occur in the long-term, are hard to articulate and harder to quantify so are often excluded from finance mechanisms.	<ul style="list-style-type: none">• Develop methods to quantify social and environmental outcomes to enable projects generating these outcomes to compete effectively with those focussing on short-term economic outcomes.	<ul style="list-style-type: none">• Adjust project or finance appraisal methods for govt supported finance or those supporting access to finance to account for multiple and long-term outcomes and ensure they are considered equally and throughout the appraisal process.

Improving access to finance



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Barrier	Responses that could be implemented immediately	Responses that require legislative or policy change
Barriers to partnership working: Balancing motivations, processes and timescales of multiple organisations is time consuming and costly.	<ul style="list-style-type: none">• Provide financial support for partnership building and momentum building.	<ul style="list-style-type: none">• Ensure capital grants for relevant partners include a specific remit for adaptation.

Concluding thoughts and insights from initial launch



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- Adaptation projects can be hard to finance
- More focus needed on social and environmental and long-term outcomes [and recognise diverse forms of value]
- Matching value to investment/repayment
- Who pays and who benefits?
Distribution of value
- More focus needed on enabling partnership working
- How to build in flexibility?

