Definite CCRI

DEFINITE-CCRI

Report on Investor Base and Financial Instruments

(Deliverable 2.3.)

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Executive Summary

The current document lists and describes types of financiers as well as financing structures suited for financing CE projects. It further serves as starting point to start mapping received proposal outlines with potential investor groups and instruments.

The identified investor categories for the purpose of the DEFINITE-CCRI project are the following, divided in 3 main categories:

a. Private Sector Investors
    - Private Banks
    - Impact Investors and Socially Responsible Investment (SRI) Funds
    - Green Infrastructure Funds
    - Corporate Investors
b. Public Sector Funding Institutions
    - Public development banks and funds
    - National and regional governments
    - Municipalities and local authorities
c. Philanthropies

As for the instruments that the aforementioned actors are most likely to deploy for the DEFINITE-CCRI projects, the following are treated in this document:

a. Debt Financing Structures
    - Project Finance
    - Revolving Credit Facilities
    - Impact-Linked Loans
    - Green and Sustainable Loans
b. Equity Financing Structures
    - Angel Investor Setup
    - Pooled Funds
    - Equity-to-Debt Convertible Option
    - Senior/Preferred Equity Tranche

The document is then closed with a paragraph assessing the additional factors that might determine the investor decisions, based on the track record and the conversations held by BwB and Circle Economy in the framework of this project:

a. Project Scalability and Market Potential
b. Return on Investment (ROI) and Financial Viability
c. Regulatory and Policy Support
d. Track Record and Management Team
e. Risk Mitigation
f. Exit Strategies

DEFINITE Consortium Partners

Logo	Organisation	Type	Country
ICLEI Local Governments for Sustainability	ICLEI EURO	Small and medium-sized enterprise	Germany
CIRCLE ECONOMY	Circle Economy	Non-governmental organisation	The Netherlands
gent:	Stad Gent	Municipality	Belgium
BwB	Bankers without Boundaries (BwB)	Non-governmental organisation	Ireland
EPU N•T•U•A	National Technical University of Athens (NTUA)	University	Greece

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List of abbreviations used

BwB	Bankers without Boundaries
CCRI	Circular Cities and Regions Initiative
CE	Circular Economy
CSA	Coordination and Support Action
EGF	The European Guarantee Fund
EIB	European Investment Bank
EoI	Expression of Interest
EU	European Union
IP	Investment Platforms
PDA	Project Development Assistance
PF4EE	The Private Finance for Energy Efficiency
PoC	Proof of Concept
ROI	Return on Investment
SPV	Special Purpose Vehicle
SRI	Socially Responsible Investment
NTUA	National Technical University of Athens

1. Purpose of the document

The current document aims to present the preliminary research performed to ensure a successful selection of the best-placed investor categories finance projects in the circular economy field, as well as a list of financial instruments that are applicable for financing such projects.

The team has shortlisted the key EU-based investor categories actively operating in the circular economy field, and compiled a list of all the financing instruments that such actors have deployed or might deploy for the 4-to-6 projects that will be shortlisted by the DEFINITE-CCRI team by the end of the deal engine process.

It should be reminded that, for the purpose of this investor base assessment, the team has considered that the eligible projects will follow these criteria:

a. The investment must be comprised between €10M and €20M, whether in debt or equity form
b. They must show capacity to generate cashflows and unlock revenue streams
c. They ought to be legally based in the EU or in the associated EU countries
d. Projects can produce direct impacts for cities and regions and/or display the capacity to establish relationships and collaborations with such actors
e. They have demonstrated a clear impact on some aspects of the circular economy, as it will be assessed by the National Technical University of Athens (NTUA), Circle Economy and ICLEI.

During the first 8 months since the inception, the DEFINITE-CCRI consortium engaged with and reached out to multiple financing actors (see Annex I), discussing the objectives of the project and understanding the extent to which circular economy is part of investment mandates for investors, so to sign Expression of Interest (EoI) Letters in order to present these investors with concrete projects in due course.

This document summarises the content of the discussions held with investors, indicates investor categories, outlines the financing instruments that are likely to be deployed, and adds further considerations expressed by investors affecting the final investment decisions in shortlisted DEFINITE-CCRI projects.

2. Relevant Investor Categories

Leveraging its existing relationships with the private and public finance sector, BwB has led a feasibility analysis to understand which financial institutions or funds will be suitable in forming the ideal investor base. Based on the current engagement outcomes, this section includes potential investors and their respective instruments, to help create engagement with projects throughout the project lifecycle.

In particular, the engaged investors belong to the following categories:

2.1 Private Sector Investors

Following the rationale behind the creation of DEFINITE-CCRI, “to deliver bankable projects to investors and thereby actively contribute to the implementation of the European Green Deal”, private sector investors play a key role in enabling circularity and supplying capital with market considerations in mind. As stated in the DEFINITE-CCRI Grant Agreement, “[…] the current landscape of European CE projects shows that there is discrepancy between projects with high impact and those with a high degree of bankability.” and “[…] financiers on the other hand are often reluctant to spend additional resources at the initial preparatory stage for developing projects and therefore upfront this cost. In some cases, such costs are then reflected in the cost of capital, which makes it more challenging for projects to receive investment."

Compared to traditional sector projects, those relating to circular economy, tend to present some additional complexities for revenue-seeking investors, due to a series of factors:

a. Economic Viability: Assessing the profitability, market demand, and scalability of circular economy initiatives can be complex, as it often involves predicting consumer behaviour, market trends, and the competitive landscape.

b. Long-Term Perspective: The transition to a circular economy is a long-term process that requires sustained investment and commitment. Investors need to be patient and understand that returns on investment in the circular economy may not be immediate or easily quantifiable. It often involves rethinking business models and adopting a more holistic view of value creation.

c. Leveraging of multiple actors: In an effort to generate revenues from multiple sources that do not simply rely on the mass production and selling of products and services, circular economy projects generally require the collaboration of multiple actors, which increases the complexity in the creation of financing agreements.

d. Innovation and Technology: The circular economy relies heavily on innovative (and often untested) technologies and business models to enable the efficient use of resources and the reduction of waste. Investing in circular economy projects often involves assessing and understanding emerging technologies, such as advanced recycling techniques, material recovery, and remanufacturing processes. Evaluating the viability and scalability of these technologies can be challenging, as they may still be in the early stages of development or lack a proven track record.

e. Regulatory Environment: The regulatory landscape for the circular economy is evolving, with governments and international bodies implementing new policies and regulations to promote sustainable practices and incentivize circular business models. Investing in the circular economy requires staying abreast of these regulations and understanding how they may impact the profitability and feasibility of projects.

In an effort to bridge this gap, and to engage investors further in the circular economy sphere, private financing institutions are the main target and expected partner for DEFINITE-CCRI, which has engaged actors from the following key categories:

2.1.1 Private banks

Private banks in the EU play a crucial role in supporting investments in the circular economy. They provide a range of financial services and expertise to individuals, businesses, and organizations, contributing to the transition to a sustainable and circular economy model. Yet, while many banks claim to be interested in matters of sustainability and circularity, not many of them directly provide investments in circular economy projects.

BwB, with the support of the DEFINITE-CCRI consortium, has identified multiple banks interested in projects fitting the criteria previously listed in this document. Of such private banks, many have embraced impact investing and sustainable finance principles. They offer dedicated funds or investment vehicles focused on supporting projects with positive environmental and social impact, including circular economy initiatives. Nonetheless, most of these actors also employ rigid criteria for approving the final investment decision, mostly related to geographical or development stage considerations.

Among the key private banks that are active in the circular economy field, **ING, Triodos Bank and Rabobank** have been the most active and relevant to deploy capital in this sector and do represent potentially relevant actors for the DEFINITE-CCRI-selected projects.

Offered financing solutions: debt solutions (mainly project finance, revolving credit facilities and sustainable loans) depending on the maturity and the features of the project

2.1.2 Impact Investors and Socially Responsible Investment (SRI) funds

Similar to private banks with environmental or circularity remits, impact investing or Socially Responsible Investment (SRI) funds select projects that aim to address specific social or environmental challenges. The main goal of impact investing is to create measurable and sustainable change while still generating financial profitability. Impact funds and private banks tend to differ under several points of view: (1) purpose (2) investor base (3) investment approach (4) risk and return profiles.

1) Purpose: While impact funds are investment vehicles aiming to generate returns and positive social or economic impact, private banks are financial institutions whose objectives are rarely clearly defined by a topic, but are strictly aiming to preserve and grow the wealth of their clients
2) Investor base: The typical investor of an impact fund will be attracted by the investment rationale of the vehicle, whether it's a social or an environmental issue. Conversely, private banks clients tend to be attracted more by returns and solid capital preservation measures
3) Risk and Return Profiles: Impact Funds: On the one hand, impact funds recognize that achieving positive impact may require taking on higher risks or investing in nascent sectors or geographies. As a result, the risk profiles and financial returns can have a high variability depending on the specific investments. Private banks, conversely, typically prioritize capital preservation and steady growth of wealth for their clients. They design investment portfolios with a focus on risk diversification and long-term financial returns.

Both impact investors and SRI funds can play a crucial role in supporting circular economy investments in the EU and are likely to be more open than large private banks to support early-stage projects and ventures.

BwB has identified no less than 3 impact investing funds whose investment thesis and past investments fit the criteria put forward by DEFINITE CCRI. They include ASN Impact Investors, LGT Impact Ventures or BlueOrchard finance. Through the city of Ghent, the consortium was also informed about the existence of Flemish impact investors as listed on the VLAIO (Flemish agency for innovation & entrepreneurship) website, which include: 247 Invest, Angelwise, BAN Flanders, Birdhouse, Damier and others.

Offered financing solutions: A mix of debt and equity solutions depending on the fund approach and investment rationale

2.1.3 Green Infrastructure Funds

Green infrastructure funds are investment vehicles that specifically target projects and companies involved in renewable energy, waste management, sustainable agriculture, and other circular economy sectors. They attract investors seeking to contribute to the transition to a low-carbon and resource-efficient economy.

A green infrastructure fund plays a significant role in advancing the circular economy by providing financial support for infrastructure projects, supporting circular business models, and promoting resource efficiency. These funds finance the development of recycling facilities, waste-to-energy plants, and other infrastructure needed for efficient resource management. They also invest in companies adopting circular business models and technologies that optimize material and energy use. Through their capital allocation, green infrastructure funds contribute to creating a circular economy ecosystem that minimizes waste, maximizes resource efficiency, and promotes sustainable production and consumption.

In terms of the alignment with the DEFINITE-CCRI scope, a green infrastructure fund might be interested in:

- Recycling facilities
- Waste-to-Energy Plants
- Composting Facilities
- Water Treatment and Reuse Systems
- Industrial Eco-parks

Offered financing solutions: equity and debt solutions. In particular, such funds are most likely to deploy equity instruments, with a focus on angel investor setup (see section 3 for more details) for seed and early-stage ventures.

There are several private circular green infrastructure funds in the European Union. **Closed Loop Partners** manages the Closed Loop Infrastructure Fund, which invests in circular economy infrastructure projects such as recycling, waste management, and sustainable packaging. **Circularity Capital** focuses on investing in European companies operating within the circular economy, providing growth capital and strategic support to businesses involved in resource efficiency, waste reduction, and sustainable materials. **The Circularity European Growth Fund** is a private investment fund that targets European companies operating in the circular economy. The fund invests in businesses involved in circular product design, remanufacturing, recycling, and waste management.

2.1.4 Corporate Investors

Large corporations that embrace sustainability and circular economy principles may seek investment opportunities in startups or projects aligned with their strategic goals. They can provide capital, industry expertise, and access to markets, making them attractive partners for circular economy initiatives.

While BwB or other consortium members have not yet engaged with corporate investors, such actors still represent a relevant set of investors that might be engaged during the Project Development Assistance (PDA) phase if the project managers express this desire or if the project lends itself to being matched with specific industry actors.

In Europe, most large corporations have deployed or supported at least some kind of circular economy project depending on the field they are in:

- In the Energy field, Schneider Electric Ventures, Total Carbon Neutrality Ventures and Enel Green Power Ventures have supported and will be able to support circular economy projects
- Consumer products companies like Unilever, Philips, IKEA, and Danone have demonstrated a commitment to the circular economy by implementing sustainable business practices, supporting recycling and waste reduction efforts, and investing in circular innovation and might help supporting early-stage ventures such as the ones put forward by DEFINITE-CCRI
- In Green technologies, TOMRA, Veolia, SUEZ, and Renewi are active players in waste management, recycling, and resource recovery and might benefit from innovations formulated by DEFINITE-CCRI for their business

Offered financing solutions: mostly equity solutions, including purchase of the entire startup/project in case it can showcase solid returns and synergies with the company's operations.

2.2 Public Sector Funding Institutions

While not belonging to the main target and scope of DEFINITE-CCRI, keeping in mind the objective of leveraging private capital for supporting pilots, help structuring and upscaling circular economy projects, public sector investors play a key role in supporting the development of such early-stage and underinvested sectors, especially at the EU level. For this reason, BwB has engaged with financing actors in the public sector realm, and collected their investment remit, their preferences in terms of project categories, and their preferred instruments.

2.2.1 Public development banks and funds

Development banks, such as the European Investment Bank (EIB) and regional or national development banks, have mandates to support sustainable development and invest in projects that align with the circular economy.

The European Investment Bank, in particular, indicates that, "through risk sharing, it provides finance to circular economy projects/promoters with a typically higher risk profile." Additionally, it supports CE projects through:

- leveraging horizontal (market) studies to further define funding gaps,
- recommending internal EIB-managed instruments and/or Investment Platforms (IP), where necessary,
- structuring/implementing Investment Platforms that mobilize public/private investors.

When it comes to the instruments and funds, the EIB can deploy when it comes to CE projects, the bank can utilise:

- The Connecting Europe Facility Debt Instrument
- The European Guarantee Fund (EGF)
- The Innovation Fund – PDA
- InnovFin
- InvestEU
- The Modernisation Fund
- The Private Finance for Energy Efficiency (PF4EE)
- The Recovery and Resilience Facility and financial instruments

While the potential involvement with the EIB is still under discussion, the consortium believes that the remit and existing involvement of the bank, and of public investment banks in the EU in general, closely aligns with the objective and the scope of work of DEFINITE-CCRI for the unlocking of funds for CE projects.

Furthermore, BwB has been engaging with European National Investment Banks, in particular InvestNL, whose geographical scope is limited to the country borders, but whose willingness and capacity to invest in early-stage CE projects makes them particularly relevant for DEFINITE-CCRI. These networks can be considered for investment matching depending on the projects' jurisdiction.

2.2.2 National and regional governments

The role of national and regional governments should not be overlooked when it comes to investing in projects within the scope of this initiative. Such actors and entities, in fact, might benefit from them in a multiplicity of ways, including, among others:

- Environmental benefits
- Economic opportunities
- Resource security
- Cost reduction
- Social and health benefits
- Compliance with EU regulations

For this reason, consortium partners still consider that such actors should be included among potential investors, as long as a logic of "a high degree of bankability" is taken into account. This means that, if included among the potential investors in DEFINITE-CCRI projects, such entities should include a logic of financial return from projects. The advantage for public sector actors, however, is that indirect cost reduction (such as lower health costs or increased resource security) might also be considered part of the return on the investment as co-benefits, which could also increase the speed at which circular economy projects might break even and generate a real return on investment.

BwB has not yet engaged with such actors, but an outreach during the PDA phase should not be excluded if the projects lend themselves to this kind of activities.

2.2.3 Municipalities and local authorities

The same considerations expressed for regional and national governments also apply to municipalities and local authorities: the co-benefits that can be produced by CE projects might represent a portion of the envisaged return on investment of the shortlisted projects. Yet, municipalities tend to have access to much more limited funds to be able to invest directly in projects of this kind and of the projected size, which makes this investor category less likely to deploy funds than national or regional governments.

Since most of applicants to the DEFINITE-CCRI PDA assistance have applied in collaboration with municipal entities or local authorities, it is possible that a portion of the investments might also come from such authorities themselves, but it is unlikely to cover the totality of the financial needs the projects will require.

2.3 Philanthropies

While philanthropies do not provide investments, but rather offer grants to environmentally or socially impactful projects, they can represent a helpful category to provide a portion of the capital needed to CE projects or take part in blended finance structures that might be structured in collaboration with private investors. Philanthropies, in fact, tend to value direct capital deployment in CE projects due to:

- Alignment with philanthropy's mission and values
- Catalysing innovation and scaling solutions
- Leveraging of additional investment (I.e., blended finance solutions)
- Demonstrating proof of concept (PoC)
- Addressing market failures

BwB will consider the relevance an involvement of such actors during the PDA phase and will engage them where needed for a possibility of capital injection or for the support to proof of concepts. Some of such relevant philanthropies in the EU which could be relevant to DEFINITE-CCRI are:

- The Ellen MacArthur Foundation. A leading organization focused on accelerating the transition to a circular economy. It collaborates with businesses, governments, and academia to promote circular economy principles. The foundation provides funding, knowledge sharing, and supports innovation in the circular economy space.
- European Climate Foundation. The entity is dedicated to promoting climate action and sustainable development in Europe. They support various initiatives related to the circular economy, including research, policy advocacy, and project funding. Their focus is on driving the transition to a low-carbon and resource-efficient economy.
- Adessium Foundation. A Dutch philanthropic organization that focuses on creating a sustainable and just society. They support initiatives related to environmental conservation, sustainable development, and circular economy practices. Their funding efforts aim to promote systemic change and address pressing environmental challenges.

	Investor category	Public/Private	Deployed instruments	Relevance for the DEFINITE-CCRI target projects
1	Private Banks	Private	Mostly debt	Private banks might be best positioned to provide debt to DEFINITE-CCRI projects having already built a minimum viable product and/or a pilot. Investment size may vary but ideally it would target projects of €10M+
2	Impact investment Funds	Private	Equity and debt	Provided that selected projects align with the funds' objectives, such funds can be expected to provide both debt and equity. Such funds may be able to provide very early-stage financing through an angel-investor setup, so targeting also small projects (<€5M)
3	Green Infrastructure Funds	Private	Equity and debt	In the DEFINITE-CCRI context, these funds will most likely target infrastructural projects of mid-sized development. The expected size should be at least €10-20M
4	Corporate investors	Private	Mostly equity	Corporate investors can provide financing in different forms depending on whether they are interested in acquiring the business or just in providing support. In the former case, they will offer equity even in relatively small amounts (starting at €1M). In the latter, they can provide small innovation grants to selected projects to fund their growth and development
5	Development Banks and Funds	Public	Equity and debt	Organisations such as the EIB or national funds have access to a plethora of instruments, including technical assistance. This leaves them with large flexibility on the size of investments they can take on and the conditions for projects
6	National and regional governments	Public	Debt and grants	National and regional governments in the EU generally offer at least a portion of their grant allocation to sustainable circular economy projects, but can also offer debt

				solutions for growth of promising ventures
7	Municipalities and local authorities	Public	Debt and grants	Municipal and local authorities tend to have less access to capital to be deployed for grants or debt, but they can establish synergies with local projects offering to reduce costs or improve local services. This can lead to either small grants being disbursed or to debt solutions being deployed
8	Philanthropies	Public and/or private	Grants and/or concessional debt	Philanthropies with a specific impact rationale have the possibility of delivering significant grant capital or concessional debt solutions to be repaid at advantageous conditions

Figure 1: Relevant Investor Categories Comparison

3. Relevant Financing Instruments for projects selected by DEFINITE-CCRI

So far, for each financing actor which could be potentially involved in project investments shortlisted by DEFINITE-CCRI, a reference to equity and/or debt instruments has been provided. This section delves deeper into the types of financing instruments for circular economy projects by category, taking into account the exchanges with the listed actors and the track record of investments in this field.

Grants: Before delving into the available types of debt and equity instruments, it should be clarified that, despite the numerous requests from project owners and managers to access grants or, more broadly, non-repayable funding, the scope of the DEFINTE-CCRI project is mainly focused on bridging the bankability gap that circular economy projects have, allowing them to liberate themselves from exclusively non-repayable instruments that have dominated thus far. Grant financing has therefore a limited relevance within in the context of DEFINITE-CCRI.

While grants remain an excellent tool to support CE projects' growth and scaling, whether through EU funding programmes, international grant initiatives or philanthropies, DEFINITE-CCRI will aim to match the 5 shortlisted projects with private investors looking for a financial return on their capital deployment, or to produce joint structures between private and public investors, to include a component of non-repayable or concessional capital. The following paragraphs will focus on the repayable instruments. Generally, equity instruments tend to be deployed for early-stage start-ups or ventures, which can then access to repayable debt solutions as they scale.

3.1 Debt Financing Structures

3.1.1. Project Finance

Project finance is instrumental in supporting circular economy initiatives like waste management facilities, recycling plants, and sustainable infrastructure projects. These projects require significant upfront investments, which can be secured through project finance structures. By raising debt specifically for the project, with project assets and cash flows serving as collateral, lenders gain confidence in the project's financial viability. Predictable cash flows from circular economy projects that will be shortlisted by DEFINITE-CCRI, whether generated through waste processing or the sale of recycled materials, make them appealing for private sector institutions seeking collateral and steady income. Yet, if such clear revenue streams are not sufficient to sustain operating costs and repay the debt in the forecasted timelines, a project finance setup might not work out at best.

Additionally, project finance structures offer predictable exit strategies, allowing investors to sell their stake or refinance the debt once the project becomes operational. Overall, project finance provides the necessary funding, security, and predictability for circular economy projects, making them attractive to private sector investors, but it needs to be offered to companies with clear and equally predictable revenue generation.

3.1.2 Revolving Credit Facilities

Revolving credit facilities are vital for financing the working capital requirements of circular economy businesses, including those in recycling, remanufacturing, and other circular models. These flexible credit arrangements allow borrowers to access funds as needed within an agreed limit, providing the necessary capital for day-to-day operations. Compared to project finance arrangements, revolving credit facilities accommodate the cyclical nature of circular economy businesses, enabling them to draw funds during peak periods and repay during slower periods.

By offering a revolving line of credit, these facilities ensure a continuous source of funding for growth, innovation, and market adaptation. Revolving credit facilities are essential for scaling circular economy operations, expanding into new markets, and introducing new circular products or services. They provide the flexibility and resilience needed to support the sustainable practices of circular economy businesses and advance resource efficiency.

On the flipside, revolving credit accounts typically come with higher interest rates than regular loans. Interest can become very problematic if the account is not paid in full every month. Additionally, some revolving credit accounts require to pay annual fees, origination fees, or other fees.

3.1.3. Impact-Linked Loans

Impact-linked loans provide a financing mechanism that ties the cost of borrowing to predefined circularity metrics, making them applicable to circular economy projects. These loans can be structured to align with specific circularity indicators, such as waste reduction targets, resource efficiency improvements, or closed-loop product design. However, such loans have been primarily deployed for smaller amounts or resulted in modest cost reductions. Challenges in accurately measuring and monitoring circularity metrics contribute to these limitations. To enhance the effectiveness of impact-linked loans in the circular economy, the development of standardized circularity measurement frameworks and industry-wide benchmarks is crucial.

Collaboration among stakeholders, including impact investors, financial institutions, and regulatory bodies, can establish guidelines and incentives for deploying impact-linked loans. This collaborative effort can address measurement challenges and ensure meaningful cost reductions aligned with the achieved impact. As the circular economy field grows and industry standards emerge, impact-linked loans have the potential to play a more significant role in financing circular economy projects. As for the DEFINITE-CCRI shortlisted projects, the usage of such loans might result in the partial reduction of the cost of capital, but it would probably be best suited for projects under €5 M.

3.1.4 Green and Sustainable Loans

Green and sustainable loans are debt instruments designed for environmentally beneficial projects, including those in the circular economy. These loans finance initiatives that contribute to sustainability objectives such as reducing resource consumption, promoting circular supply chains, and implementing eco-design principles. Circular economy projects focused on waste reduction, recycling, remanufacturing, and sustainable production can utilize green and sustainable loans.

These loans come with specific criteria and frameworks that assess the environmental impact of projects, ensuring adherence to sustainability standards. By aligning with these frameworks, circular economy projects can access financing at favourable terms. The development of standardized guidelines and frameworks further enhances the effectiveness and accessibility of green and sustainable loans for circular economy initiatives.

According to the World Bank, the overall green loan market size is estimated to be around €30bn. Green loans are also fit for larger projects, with examples of green loans sized €100M+.

3.2 Equity Financing Structures

3.2.1 Angel Investor Setup

The angel investor setup holds significant relevance within the circular economy, serving as a vital mechanism to attract funding for innovative and sustainable projects. This arrangement involves granting angel investors a predetermined percentage of equity at the project's inception, entitling them to a proportional share of the profits generated by the venture.

By engaging angel investors in the circular economy, projects gain access to not just capital but also valuable expertise, industry networks, and strategic guidance. To ensure a fair and transparent distribution of profits, conditions can be established regarding profit distribution. For instance, requirements may be set to achieve specific revenue targets or prioritize debt repayment before angel investors receive their share of profits. These conditions help safeguard the project's financial stability and align the interests of all stakeholders.

One notable advantage of the angel investor setup is its suitability for illiquid assets commonly found in the circular economy. Illiquid assets are characterized by limited marketability or the absence of a readily available market for trading. Investing solely in illiquid equity may deter potential investors due to the lack of immediate liquidity and uncertain exit strategies.

However, the inclusion of profit-sharing arrangements upon the generation of returns makes the angel investor setup more appealing. The promise of a regular income stream tied to project performance attracts more investors, especially for circular economy projects with long-term revenue streams or projects with extended payback periods. This structure enables investors to anticipate and plan for returns based on the project's financial performance, enhancing their confidence and willingness to participate.

3.2.2 Pooled Funds

In the context of DEFINITE-CCRI, pooled fund mechanisms offer a compelling avenue for investors to participate in multiple projects simultaneously, thereby diversifying their exposure and maximizing impact. This setup allows investors to acquire "shares" or a percentage of a pooled fund that comprises a portfolio of circular economy projects.

The pooled fund approach aligns well with the circular economy's holistic and interconnected nature. By pooling resources from various investors, the fund can support a range of initiatives across different sectors, such as waste management, recycling, sustainable infrastructure, or circular product design. This diversification not only spreads risk but also promotes the circular economy's overarching goals of resource efficiency, waste reduction, and sustainable consumption.

However, when establishing pooled funds in the circular economy, careful attention must be given to potential legal issues related to fund wrappers or special purpose vehicle (SPV) structures. Compliance with regulatory requirements, transparency, and governance practices are essential to ensure the integrity and legitimacy of the fund. Proper legal and financial expertise is crucial in designing and managing the fund's structure to address any specific considerations related to circular economy projects.

For the scope of DEFINITE-CCRI, given that BwB will not be involved in the structuring of the financing, it is unlikely that the investors and projects will be able to establish the SPV funds for this purpose, but it is not impossible for them to do that if they see it fit.

3.2.3. Equity-to-Debt Convertible Option

The equity-to-debt convertible option is a valuable investment instrument in the circular economy context. Investors have the opportunity to purchase shares representing the returns of a project, with the added flexibility to convert them into debt with fixed payments under specific conditions. These conditions typically include reaching revenue targets or certain growth points.

This option addresses investor preferences for debt arrangements with the potential to convert into equity. It offers a higher profit split and the allure of theoretical returns associated with equity investments. However, it also provides the safety net of debt conversion if necessary, ensuring a more secure and predictable stream of payments.

In the circular economy, where projects often involve long-term revenue streams and uncertainties, the equity-to-debt convertible option becomes particularly relevant. It allows investors to participate in projects aligned with circular economy principles while managing risk and ensuring financial stability. This instrument incentivizes investment in the circular economy by offering the potential for higher returns compared to traditional debt arrangements, coupled with the security of a debt instrument through the conversion option.

3.2.4 Senior/Preferred Equity Tranche

The preferred/senior equity tranche emerges as a financial instrument that caters to the unique dynamics of circular economy projects. This tranche offers investors prioritized returns compared to other equity tranches, sharing similarities with debt instruments but remaining subordinate to debt holders in terms of priority.

By providing investors with prioritized returns, this tranche offers a measure of security and stability while participating in ventures that align with circular economy principles. The prioritized nature of the returns recognizes the lower risk profile assumed by investors in this tranche compared to other equity holders.

Due to the lower risk assumed, investors in the preferred/senior equity tranche typically receive a lower share of profits compared to other equity tranches. This reduced share of profits reflects the risk-reward trade-off and ensures an equitable distribution of returns among different investor classes. The tranche structure allows investors to participate in circular economy projects while balancing risk exposure and potential financial gains.

The preferred/senior equity tranche acts as a bridge between equity and debt, blending elements of both to accommodate the specific risk and return expectations within the circular economy. This instrument enables investors to support circular economy projects with a prioritized position in the distribution of returns, offering a balance between risk mitigation and the opportunity to benefit from the growth and success of these projects.

	Financing Instruments	Equity / Debt	Frequency	Relevance for the DEFINITE-CCRI target projects
1	**Project finance**	Debt	High	Project finance is relevant to the CCRI as it provides a financing option for specific circular economy projects undertaken by cities and project owners. It involves structuring the financing around the project's cash flow and assets rather than solely relying on the borrower's creditworthiness. This instrument can be used to fund infrastructure development, technology implementation, or other circular economy initiatives
2	**Revolving Credit Facilites**	Debt	High	Revolving credit facilities can be useful in providing flexible funding options for ongoing circular economy projects or initiatives. Cities and project owners can access revolving credit facilities to obtain funds as needed throughout the duration of their circular economy projects. This flexibility allows them to adapt their funding requirements based on project milestones, changing needs, or unforeseen circumstances, ensuring the smooth progress of circular economy initiatives
3	**Impact-linked Loans**	Debt	High	Impact-linked loans align well with the CCRI's focus on achieving specific social and environmental outcomes. By linking loan terms and interest rates to predefined impact metrics, the initiative can incentivize cities and regions to implement circular economy practices effectively. Impact-linked loans offer financial rewards or adjustments based on the progress made, encouraging the adoption of sustainable practices
4	**Green and Sustainable Loans**	Debt	Medium	These financing instruments are specifically designed to fund environmentally friendly projects. By accessing green and sustainable loans, cities and regions participating in the CCRI can secure dedicated funding for circular economy initiatives, such as waste management systems, renewable energy infrastructure, or eco-friendly urban planning

5	**Angel Investor Setup**	Equity	Medium	Angel investors play a crucial role in supporting start-ups and innovative projects. In the context of the CCRI, facilitating connections between angel investors and circular economy initiatives can promote entrepreneurship and innovation within cities. This can help foster the development of new circular economy solutions, support early-stage ventures, and contribute to the overall growth of the circular economy ecosystem
6	**Pooled Funds**	Equity	Low	Pooled funds offer CCRI the opportunity to create a collective investment vehicle. By pooling resources from multiple sources, the initiative can access a larger capital base to fund various circular economy projects across different cities and regions. This approach allows for efficient allocation of financial resources, enabling the scaling up of circular economy initiatives and maximizing the impact of the CCRI across Europe. However, as per the investor conversations, it is unlikely that investors are willing to invest in a collective vehicle for early-stage start-ups in general, as they have their own review process and a pooled fund would require a new legal entity to be formed
7	**Equity-to-debt Convertible Option**	Equity	Low	By offering the option to convert equity investments into debt instruments, the initiative can cater to investors who prefer different risk-return profiles. This flexibility can help attract a wider range of investors, supporting the funding needs of circular economy initiatives within CCRI. We have marked this as low frequency as the direct relevance of equity-to-debt convertible options to the CCRI might be limited; however, this financing instrument can still attract investment in circular economy projects
8	**Senior / Preferred Equity Tranche**	Equity	Low	The inclusion of senior or preferred equity tranches can be advantageous for the CCRI by attracting investors seeking higher priority in terms of

				repayment and potential profits. By offering senior or preferred equity positions, the initiative can incentivize investors to support circular economy projects in selected cities and regions

Figure 2: Repayable Instruments Comparison

4. Factors Influencing Investor Decisions in Circular Economy Projects

The discussions held so far with interested investors in the CE field has also allowed the consortium to clarify the key considerations that will determine the final investment decision and rationale. Among the elements that have been listed, the following have appeared to be the most frequent across the investor base consulted:

- Project Scalability and Market Potential. Investors must understand the growth prospects and long-term viability of the investment. They evaluate factors such as market demand, competitive landscape, potential for expansion or replication, and the ability of the project to scale its operations. DEFINITE CCRI consortium partners, and especially BwB, will be key in producing such assessment preliminarily before the interaction with investors
- Return on Investment (ROI) and Financial Viability. Investors assess the revenue streams, cost structure, and profitability projections of the project. Investors consider factors such as the pricing dynamics, market competitiveness, revenue growth potential, and the project's ability to generate sustainable cash flows.
- Regulatory and Policy Support. The role of governmental support, incentives, or subsidies available for such projects is assessed and considered holistically for the investment thesis and rationale
- Track Record and Management Team. The team's expertise in circular economy practices, their ability to execute the project effectively, and their track record of successful project implementation are assessed thoroughly
- Risk Mitigation. Risks related to technology, market demand, regulatory changes, operational challenges, or financial viability must be reviewed. Investors seek projects that have robust risk management plans and strategies in place to address and mitigate potential risks.
- Exit Strategies. Investors consider exit strategies, such as the option for selling their investment or achieving liquidity in the future, to ensure they can effectively exit the investment and realize their returns.

Such considerations should be considered alongside different challenges specific to CE project category, which makes it a particularly complex subsector to invest in. Most notably:

- Measuring the impact and performance of circular economy projects
- Policy and regulatory uncertainties
- Innovative financing models and partnerships
- Opportunities for collaboration and knowledge sharing

A risk mitigation of such challenges will also be performed through an effective deployment of the DEFINITE-CCRI project development assistance (PDA), the joint usage of different instruments and capital sources, and a thorough understanding of all the existing and potential revenue stream generation sources.

5. Conclusion

The objective of this document is to provide an overview of all the relevant financing actors categorised by type and the key financing instruments that could be mobilised to ensure the correct deployment of capital for the 5 shortlisted projects selected by the DEFINITE-CCRI consortium.

The core assumption throughout the piece is the consideration that bankable CE projects have failed to be included in private financing institutions' investment pipelines, due to a set of market failures and complexities of the sector. The objective will be therefore to foster the collaboration between private and public actors to ensure the risks are best shared and evaluated, and to ensure that the non-monetary co-benefits generated by such projects are best optimized to encourage further investment.

This document has shown how, given the type of projects that have been received so far and the conditions that DEFINITE-CCRI has established as per grant agreement, among the listed investment solutions and investors, some of them appear to better fit the criteria.

As for the investors, the one that are being targeted and have the highest likelihood to express interest are: **international and national public development banks, private banks and impact funds.** The support of municipalities and philanthropies can be sought to optimise the conditions or to receive working capital.

The best instruments for DEFINITE-CCRI projects, given their small average size and early stage of development in the circular economy, appear to be: **angel investor setup, followed by preferred equity tranche. As the projects grow, they might expect to make use of revolving credit facilities or loans with impact or green objectives, and project finance set-up only when they are more mature and predictable in their return streams.**

It shall be reiterated, however, that the final decisions on the conditions and the recommended instruments to be used relies on the investors' considerations on a case-by-case basis and cannot be influenced by the DEFINITE-CCRI consortium.

Annexes

Annex I – Key investor engagement takeaways

Investor Name	Type	Geographic scope	Investment rationale
InvestNL	Development Bank / Investment Agency	The Netherlands	InvestNL focuses on driving sustainable economic growth in the Netherlands. As a development bank and investment agency, they recognize the importance of the circular economy in achieving long-term sustainability and resilience. InvestNL actively supports circular economy initiatives by providing financial resources, expertise, and networks to businesses and projects that contribute to the circular transition. To this end, InvestNL supports projects of at least €10M based in the Netherlands mainly through debt instruments such as project finance structures
European Investment Bank (EIB)	Multilateral Development Bank	European Union (EU) Member States and Partner Countries	The European Investment Bank (EIB) is committed to promoting sustainable and inclusive growth within the EU and its partner countries. Their rationale for investing in the circular economy lies in its ability to foster resource efficiency, reduce carbon emissions, create jobs, and contribute to the EU's climate and sustainability objectives. In terms of instruments, the EIB has plethora of tools it can deploy, both in the equity and the debt field. The target size of investments starts at €10-20M, but there is room for flexibility if needed
Triodos Bank	Sustainable Bank / Socially Responsible Bank	Various European Countries	Triodos Bank is a sustainable bank that places a strong emphasis on environmental and social impact. They actively support the circular economy as part of their commitment to sustainable finance. By investing in circular economy initiatives, Triodos Bank aims to accelerate the transition to a more sustainable and regenerative economy. Their rationale includes the promotion of responsible consumption, reduction of waste, and support for businesses that prioritize circularity and social responsibility. Yet, the bank has not yet set out a clear set of requirements for the type projects they are seeking to finance

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