

Welfare State Luxembourg 2.0 (overview)

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Abstract

As stated in Accord de Coalition 2018-2023, poverty is a key concern in the Grand Duchy. This proposal aims to make viable the government's policy ideas to strengthen social security and related efforts by fostering a new sustainable economy adding to the current economic dynamism. This new economy seeks to make better use of existing welfare programs by buttressing them with a digitally controlled token-based system called the Capability Coupon (CC). This endeavor requires revisited processes for social care, welfare provision, and proactive policies on social participation and education. The objectives are: 1) to improve the living standards of the poor; 2) to enhance people's capabilities and skills in favor of social mobility and social inclusion; and 3) to provide financially viable and localized services so that public spending is secured and remains under control.

keywords: antifragility, capabilities, freedoms, poverty reduction, quality of life, relocalize, solidarity, sustainability, welfare, climate change, energy transition.

1. Introduction

As stated in Accord de Coalition 2018-2023, poverty is a key concern in Luxembourg.¹ Yet, despite public intervention, there had been no major improvement in poverty reduction as of the latest national data. Quite the reverse, the rate of risk of poverty increased from 16.5 percent in 2016 to 18.7 percent in 2017, and has surged to the highest levels in 20 years.² To ensure the viability of the government's commitment to alleviating poverty, we propose to take another approach: building a complementary economic system (CES) that differs from the standard economic system (SES). With the CES, Luxembourg can make better use of existing welfare programs by upgrading and buttressing them with a token-based system called the "Capability Coupon" (CC). This endeavor requires revisiting the processes of social care and welfare provision to meet the needs of present and future generations.

Thus, the objectives of our proposed system are:

1. to improve livelihoods of the poor and the near-poor;
2. to enhance the quality of life for the broader public, particularly their capabilities in favor of social inclusion and cohesion; and
3. to provide *financially viable* and *localized* social care and services backed by enforceable regulations so that public spending is secured and remains under control.

Luxembourg is well equipped to create a new cooperative economic system. Its advantages are:

- a culture of openness and freedom to experiment;
- the government capacity to deliver on its political agenda of poverty reduction;
- a country limited in size (and inertia) sporting good public finances;³
- qualified experts in human development, welfare, and sociotechnology;⁴ and
- a momentum calling for a greener economy.

1 Le gouvernement Luxembourgeois (les partis de la coalition DP, LSAP et déi gréng). 2018. "Accord de coalition 2018-2023." <<https://gouvernement.lu/fr/publications/accord-coalition/2018-2023.html>>

2 Chambre des salariés. 2019. "Panorama social 2019." <<https://www.csl.lu/bibliotheque/publications/e8641e0935.pdf>>

3 Le gouvernement du Grand-Duché de Luxembourg. Ministère des finances. 2018. "19^e actualisation du Programme de Stabilité et de Croissance du Grand-Duché de Luxembourg 2018-2022." <<https://budget.public.lu/dam-assets/lb/budget2018/links-dokumenter/avril/1-psc-2018-projet.pdf>>

4 Albeit less known, Luxembourg has the needed expertise in computer science, security, and the management of large IT infrastructures to devise and operate substantial systems. Notably, a number of experts are credited with the visionary design and development of internationally leading platforms such as the OECD's PISA and PIAAC.

It is therefore *eminently* feasible to improve social welfare. Comparative advantages of the Grand-Duchy are the human and financial resources to implement this system. With the right conditions in place,⁵ a state-funded platform to end poverty can be built within a reasonable time frame (i.e. within a political term).

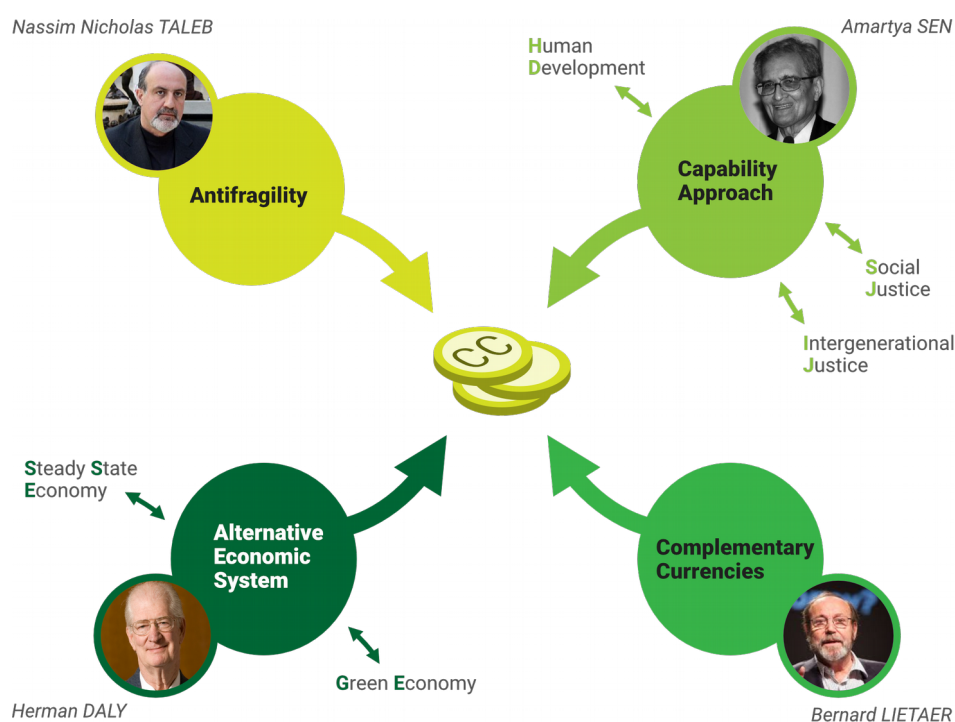
This paper’s purpose is not to furnish an exhaustive analysis of poverty. Rather, we present a pragmatic approach to poverty protection in Luxembourg. The CES can offer broad opportunities to address intractable social issues that go well beyond poverty and welfare redistribution.⁶

In the next sections, we present the basic ideas behind the Capability Coupons. Subsequently, we explain how the Capability Coupons system is designed and for whom, and how it operates to strengthen social security. Further, we enumerate the expected barriers to adopting such a system and expected gains.

2. Improvement of social protection

2.1 Theoretical foundations

Our new system is called the Capability Coupons (CC). It takes its felicitous name and inspiration from the Capability Approach (CA) pioneered by Amartya Sen, the economist, philosopher, and Nobel Prize Laureate. The idea of capability centers on the extent of freedoms that people enjoy to lead the kind of life they value. This sets the focus of evaluation on what people are able to do and to be. The idea to build a complementary economic system for Luxembourg is aligned with the notion of *antifragility*⁷ (as the antonym for fragility) developed by the risk analyst Nassim Nicholas Taleb. We also draw upon the ideas and experiences from many other scholars. Specifically, Herman Daly is widely recognized for his contribution to ecological economics and the development of the Index of Sustainable Economic Welfare as well as Bernard Lietaer, one of the principal architects of the euro and specialist in monetary systems. Let us start by discussing how to address poverty.



Box 1. Theoretical Foundations of the Capability Coupons System

5 By “right conditions in place,” we mean: an appropriate budget, a team working in professional autonomy (yet accountable and auditable), a proper work environment, without excessive administrative tasks, and so on.

6 For more details, see our paper “Welfare State Luxembourg 2.0 (a work in progress).” It is available upon request.

7 Taleb, Nassim Nicholas. 2012. *Antifragile. Things That Gain from Disorder*. New York: Random House.

2.2 How to address poverty

Repeated failures of our standard economic system and monetary system do not facilitate poverty reduction. When the private banks suddenly fail, it entails serious deficits in social services to fall back on. Ha-Joon Chang reminds us: “Unfortunately ... our financial system has become a negative force. Our financial firms have become very good at generating high profits for themselves at the cost of creating asset bubbles whose *unsustainability* they obscure through pooling, structuring and other techniques. When the bubble bursts, these firms deftly use their economic weight and political influence to secure rescue money and subsidies from the public purse, which then has to be refilled by the general public through tax hikes and spending cuts [emphasis added].”⁸ While nations have been driven further into debt, with disastrous long-term consequences, the sector in question has been left unaccountable, “despite the incompetence, recklessness and cynicism in the industry which it has revealed.”⁹

This leads to a concern of causing wealth. Joseph Stiglitz contends as follows: “To put it baldly, there are two ways to become wealthy: to create wealth or to take wealth away from others. The former adds to society. The latter typically subtracts from it.”¹⁰ Then, predatory practices (by the takers) must be prevented, whereas genuine wealth creation (by the makers) must be fostered and rewarded to ensure equity and justice for all.

Climate change is among many problems that threaten humanity. In a climate emergency, an environmental-friendly economy must include consideration of food/water safety, local carbon-free energy production, local hiring and sourcing, and locavore consumption habits for poverty prevention. This puts back at the center of our immediate concern local economic activities and sectors (e.g. ecology-friendly family farms, farmers markets, seeds banks), the afferent logistics, and public education to make a more sustainable prosperous living. That is what we call being economically *and* ecologically responsible or “eco-responsible” that results in expanding human capabilities and well-being.

As we have seen in the past, money becomes useless in times of economic collapse. Indeed, money in itself is not valuable; it only becomes valuable when it enables people to exchange goods and services with others or when it reliably translates into improved well-being and capabilities in society. So, what is it we need to do in responding to poverty protection in view of climate change? How do we urgently shake things up in terms of social visions for enhanced antifragility, capabilities, and sustainability, while keeping in mind that the finance, the economy, and the ecosystem are all interlinked together? In our views, the answer lays in the creation of a complementary economic system (CES) that adds wealth to our society, but differs sufficiently from the standard economic system (SES) to obviate its flaws.

Leveraging emergent technologies, the Capability Coupons (CC) is a new system creating a means of economic diversification to advance human capabilities and to achieve greater social and economic inclusion, especially for those living on the edge of homelessness and those experiencing difficulty in meeting basic needs.

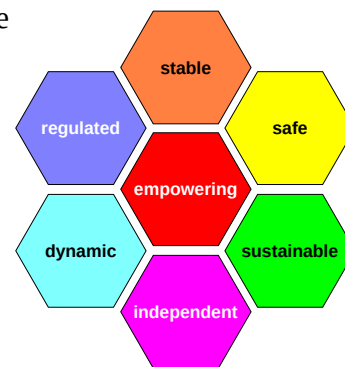
In the CES, transactions are performed in CC, a local currency devised to add value to the economy in Luxembourg. The budget of the CES is initially allotted in euros. A progressive and incentivized taxation scheme is the only direct way to make CC tokens converted back to euros (which are then subtracted from the CES budget before returning to the SES). All transactions are traced by a blockchain-based system to prevent problems from occurring. The CES budget can be underwritten by public institutions, private and public groups, and individuals to conduct welfare undertakings.

8 Chang, Ha-Joon. 2014. *Economics. The User's Guide*. New York: Bloomsbury Press, 224-225.

9 Ibid, 222.

10 Stiglitz, Joseph E. 2012. *The Price of Inequality*. New York: W. W. Norton & Company, 32.

Durable welfare and antifragile future require a CES anchored in a more eco-responsible solidarity economy. Thus, the CES ought to be independent, dynamic, regulated, empowering, stable, safe, and sustainable (cf. Box 2).¹¹ Two conditions make possible the adoption and good functioning of the CES: the enforcement of stringent regulations and transparency. The CC platform enforces rules including a negative interest rate where CC tokens “age” and “melt” if not spent within a certain period of time.¹² As the platform recollects the fractions lost by unused tokens, it recycles them in new tokens ready to be put back into the CES. Contrary to cryptocurrencies systems, no participant can remain unidentified in the system. All transactions are completely publicly viewable; yet, data privacy will be enforced in accordance to the applicable regulation. The legitimate usage of the CC tokens will be made clear upfront as well.



Box 2. Qualities of the CES

The CC is a welfare-enhancing help. Tokens supplement income support for the poor, while simultaneously promoting an increase in the goods and services they receive. In contrast to euros, CC tokens never leave Luxembourg’s economy and serve as pure social money. As Lietaer and Dunne put it, social money is “intended to be spent, not saved”¹³ and thus it has implications for social relations. Devised in a spirit of collective good and fairness between generations and within each generation, the CC is there to encourage all of us to care about sustainability of economic and social lives, to revive eco-responsible decentralized production systems and behaviors increasing access to local goods and services, to reinvigorate the environment, to take part in the life of the community, to check on the neighbors in need, and, in this way, to be better prepared for future hard times. The CC rewards people’s ability to live sustainably, to conserve ecological commons, and to create a better society. Guided by social justice principles, a sustained sense of dignity and the capacity to participate in the life of society can be restored to people who live in near poverty and social deprivation, thereby giving voice to their concerns and needs.

In short, the CC adds an economic diversity to Luxembourg and facilitates wealth creation (not debt worsening). The CC thus represents a viable means of attending to the needs of the disadvantaged and, for the wider public, it provides a tool to forge a better life. Below, we show how it works.

3. The Capability Coupons – How to achieve it?

History accounts for innovative complementary currencies that worked surprisingly well. One such case was the miracle of Wörgl in Austria from 1932 to 1933 that resulted in a growth in employment. Regrettably, after thirteen months of use, it came to be blocked by the Central Bank that had faced pressure and dissuading lobbying activities against the system, even though it was socially beneficial.¹⁴

Today, numerous community currencies exist. Many sprung out of necessity during economic crises or were created to meet the needs of local communities to improve their daily life. Luxembourg has one complementary currency, Le Beki, which has been in use since 2013 in the canton of Redange for the purpose of community development and eco-friendly living. It is in a sense similar to the WIR, a Swiss complementary currency created in 1934 in the aftermath of a worldwide economic depression.¹⁵ The WIR is rightly attributed to a part of the relative economic stability (or “antifragility” in Taleb’s term) of Switzerland.¹⁶ Yet, the preliminary review of the literature reveals that no Luxembourgish complementary currency specifically aims at poverty alleviation.

11 These features of the CES are explained in our report “Welfare State Luxembourg 2.0 (a work in progress)”.

12 It is called “demurrage” and can be seen as a time-related charge (i.e. negative interest) or a parking fee on money. This is based on Silvio Gesell’s free money theory.

13 Lietaer and Dunne. *Rethinking Money*, 68.

14 See Lietaer, Bernard. *The Future of Money*.

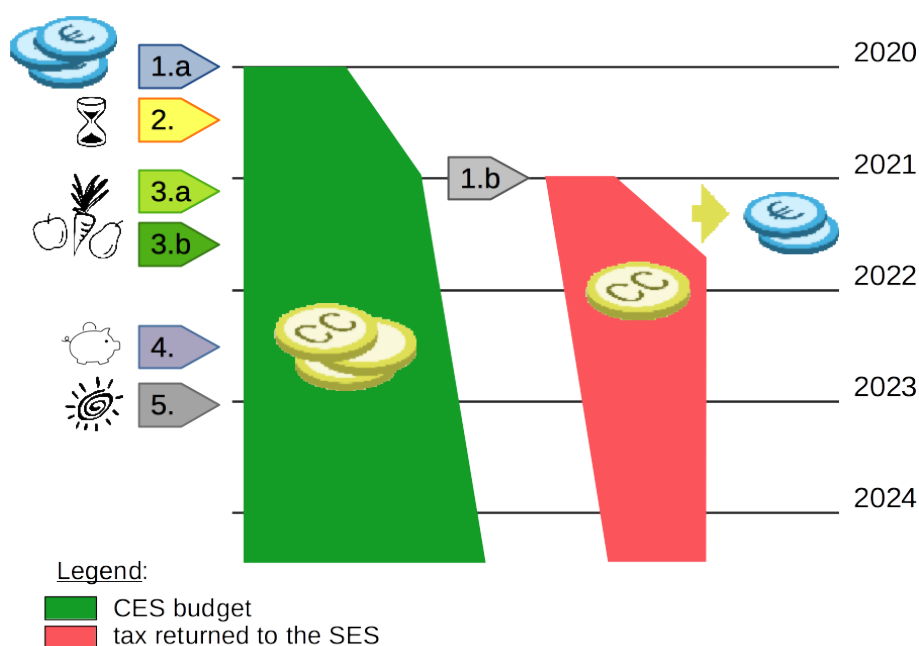
15 Ibid.

16 Beard, Philip and Tobias Studer. 1998. “WIR and the Swiss National Economy.” (downloadable online).

3.1 Budgeting the CES and the Capability Coupons platform

Money performs different functions at the same time that contradict one another. “The money [we] use to buy a loaf of bread in the bakery is completely different from the big capital which is traded on the stock markets.”¹⁷ And, a large proportion of all the money does not end up in the real economy (e.g. only about 15% in the US), but stays in a closed-loop system of finance.¹⁸ In the CC, we are thus interested in circulating money as a medium of exchange, for example, to buy some food, which is different from the money as an object of speculation for self-enrichment.

Money serves to be used to value goods and services. Its value is usually backed by real capital (assets, commodities such as time, land/real estates, gold), or by trust.¹⁹ In essence, a fiduciary money (including the euro) represents nothing but trust in those who declare its value to be legal tender. The euro is created by debt and accepting debt as a payment is *in fine* a matter of confidence in the banking system, and if banks fail, in the government that often bails them out. Yet, by design, the euro is an essential artifact of our SES. Likewise, for the initial phase of the CES, the euro plays an essential role as explained below.



Box 3. *The Three Prime Types of Budget Provisioning of the Capability Coupons Platform Underpinning the Social Care Services and Goods Operated in the Complementary Economic System (CES)*

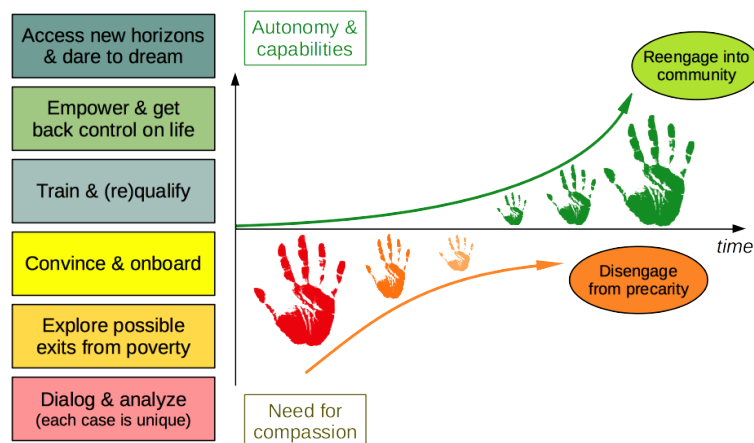
In the first phase, to meet the primary objective of improving the living standards of the needy, we suggest that the CES ought to make better use of existing welfare programs. Part of budgets (in euros) should be converted to Capability Coupon (CC), while other personal contributions (in euros) follow an identical process (cf. Box 3, input 1.a). It means that the CC budget will be first backed by debt money. This debt-financed budgeting is vulnerable and needs to be consolidated into an antifragile financing. Yet, it is a cost-effective and dynamic way to put the CES in place, and is essential to quickly capture potential synergies among all stakeholders. An incentivized tax plan is central to mobilize resources and to interest the service providers in participating in the CES. In this plan, taxes provisioned in CC are converted to the equivalent amount in euros and withdrawn from the funding (collected via the input 1.a). Contrary to the Beki of Redange, CC are not converted to euro outside the tax plan.

17 They are Michael Ende’s words in the NHK program Michael Ende on the Money-go-Round in 1999.

18 See Adair Turner’s work.

19 Lietaer and Dunne. *Rethinking Money*.

It should be clear by now that the CC platform is a not-for-profit system. Thus, in the second budgeting phase, part of the value created (e.g. by recycling “melted” parts of unused CC tokens) or deducted (e.g. via a 1% tax on all transactions) in the CES is repurposed not only to finance the incentive of the tax plan, but also to reward individuals for the time they spend for public benefits (cf. Box 3, input 2). This can buttress programs that aim for progressively reengaging the poor in an activity in which their time is valued (cf. Box 4).



Box 4. (Re)engaging the Worse Off (e.g. in Urban Farming)

The third phase requires time and resources to contribute to the CES since it is based on nature (to grow fruits and vegetables) and on agreements among the State, the cities, and the tenants of public kitchen gardens to be enrolled into the CC system.²⁰ In this phase, the CC budget is backed by land and environment to make the economy greener (cf. the post-Weimar’s Rentenmark)²¹ or to green public procurement. To begin with, public authorities request the collection of rents on the public kitchen gardens in CC (cf. Box 3, input 3.a). The tenants can sell their produce to get paid in CC. Likewise, owners of private kitchen gardens can enlist (with new incentives that drive the green economy) into the CES to be paid in CC (cf. Box 3, input 3.b). In this way, people can be tasked with obtaining CC benefits from various sources of income and green local procurement, which helps poverty prevention.

Increasing the CC budget is not an end in itself. The aim is for it to remain in balance to produce and deliver improved levels of goods and services for low-income households, by re-investing in their means of making a living. Growing public awareness of the CC as well as a better understanding of what is at stake with the issues of the poverty, an aging society, and environment will pave the way for more diverse provisions of budget over time (as suggested by input 4 and 5) to make true wealth, notably for people and their capabilities.²² Eventually, when the CES reaches a critical mass in terms of budget and turnover, economic security becomes available to more people and it will naturally predispose them to spend their euros (instead of hoarding them) in the SES for the unique possibilities this system can offer.

3.2 Governance

Given the lessons drawn from the past, the CES must avoid all interference that limits the government’s ability to use this medium to provide social protection. To this end, it ought to be completely free from financial speculation and the CC should be restricted to domestic transactions in Luxembourg.

As for a practical concern, the CC system starts small, at first as a research and development project primarily serving the neediest people (such as the unbanked, the unhoused, and single-parent households) and focusing chiefly on basic essentials to tangibly improve their daily life. It will continue in a restricted manner and grow organically, for the inevitable period of transition to the CES, to expand its reach via local networks of small eco-responsible actors and public services.

At a strategical level, for the sake of public confidence and transparency, it is important to involve various types of actors to inform and influence the governance of the CES. Government, NGOs, local authorities, civil society, and groups (including the front line workers, the near poor, experts, etc.) ought to jointly discuss, on a regular basis, the priorities and orientations of the CC allocation and conditionality

20 The Government has just unveiled a Luxembourg Urban Farming programme that is very complementary to this proposal. <<http://urbanfarming.lu>>

21 After the First World War, with no gold left to back the national currency, the *Papiermark*, Germany faced a dreadful economic crisis crippled by hyperinflation. Salvation came from the *Rentenmark*, a new currency backed by the land that was mortgaged to agriculture and business.

22 For inspiration, see the complementary document titled “Diversifying the budget of the Capability Coupons Platform.”

(as collective choice based on reasoned decision-making). A steering authority acts duly summarizing and formalizing the debate outcomes, ratifying the decisions, and transmitting them at the operational level.

At an operational level, a dedicated entity engages in the many aspects of a day-to-day functioning of the CES. This includes mapping out the actions and decisions of the steering committee, building and organizing a network of participating service providers, and so on. This key entity shall be a not-for-profit institute (e.g. a Luxembourg Institute or a “Fondation”).

At a technical level, the lifecycle of the new CES will be supported by an ecosystem of participating people (CC users, a network of services providers and opportunities enablers, practitioners, and the like), digital resources (CC tokens, software for service discovery, CC payment, personal digital wallet access, blockchain storage and operation algorithms, and more), and infrastructures (Internet access, IoT network access, server-type computers, and related supplies).

For businesses, technical issues require quick and efficient responses. Service providers have basic things to do such as printing price tags in CC, recording CC transactions in an accounting system, etc. The absence of a proper support would stand as a de facto barrier to the adoption of the system, limiting the CES efficiency, relevance, and development. Thus, it is of the utmost importance that the institution operationalizing the CC system proposes ways to break down such barriers.

At individual level, for most participants, accessing to the CC services can be done as easily as using a modern banking mobile-app. For the others, it can be as easy as calling for a taxi. Whether it is used directly or via a proxy, the application will first offer five services: a powerful search engine (for locating goods / services), a services exchange corner, a secure CC wallet, a dashboard, and an assistant.

In sum, in order for the CC to be widely adopted and useful, the system must be equipped with structures and processes (for governance and operation) fit for the variety of needs, tasks, and issues faced in the day-to-day life of the CES.

3.3 How to do the CC: structuring benefits and services

In concerted efforts to address in a durable manner the issue of poverty and, more broadly, capability deprivations, the steering committee comes up with an evolutive strategic plan for “a broad-based programme that is freedom-oriented not just in the sense of being protective of liberty, but also in the sense of providing social support for crucial freedoms that people have reason to value” (e.g. freedom from hunger and ill-health).²³ It is wise to stick to this guiding vision. The plan outlines a set of concrete work areas consolidating existing or emerging field initiatives. For each work area, a number of objectives must be proposed for programs “determined by a process of democratic social choice.”²⁴

In turn, the steering committee must find (and engage) sponsors sharing similar objectives and, with them, set the targets in terms of benefits and services provision. A list of known performance indicators (KPI) ought to be proposed²⁵ for assessing, for each objective, a level of completion and the contributions in terms of social value and moral value.

Based on Herman Daly’s concept of steady state economy,²⁶ communities can, for example, develop capacities to make basic goods and services (e.g. agricultural produce) in synergy with the Luxembourg Urban Farming initiative. To fund this effort, the sponsors pledge their support and engage a certain amount of euros to be immobilized and reserved for a budget. The CC tokens (units of value) will be issued for the capability enhancement. Let’s see how.

Consider an example. Anna, an older infirm woman with low pension benefits, cannot do certain daily chores (grocery shopping, food preparation, driving to a doctor’s appointment) by herself, as attested by her medical doctor. Her case is reported to the committee that steers the CC allowance. The steering

23 Sen, Amartya. 2013. “The Ends and Means of Sustainability.” *Journal of Human Development and Capabilities* 14: 10.

24 Ibid.

25 The authors propose that, for preventing the prominence of technocratic and financial accountancy views, such a list of KPI is built and adjusted in a multidisciplinary consultation including field practitioners and moral reference authorities.

26 Daly, Herman. 2016. *From Uneconomic Growth to a Steady-State Economy*. Massachusetts: Edward Elgar Publishing.

authority follows the recommendation of the steering committee and grants Anna a complementary monthly allowance of 500 CC. Anna asks Bob's help in compensation for the CC. Both Anna and Bob need to be enrolled since individuals and entities (e.g. a store accepting the CC in payment for their goods) can receive and make use of the CC only when known by the CC system. In this way, the CC can be gradually distributed according to the needs for capability enhancement.

Bob then makes use of the CC to buy the locally grown organic food. Afterwards, as people can earn CC tokens by engaging in green jobs (e.g. being part of organic waste recycling plan, tending community gardens, planting trees), the tokens are transferred to the community gardener Claire who pays for social care fee of her 5 year-old daughter at the center. The day care manager David asks enrolled local companies to equip the facility with a wheelchair ramp and to install renewable energy systems. At the end of this economic process chain, the managers of these companies, Emily and Fred, accept the CC in payment for services and pay their taxes in the form of CC.

In this way, arrangements are naturally made among participating people and organizations to benefit the most vulnerable residents, the general public, and the environment altogether in the end. Of course, rules must also be established for both the CC users (CC welfare conditionality and compliance, data use and protection, etc.) and those who work for the CC system (a code of ethics, data protection, etc.).

To meet the challenges of social injustice and environmental crisis, there is a need to have strong government action and political leadership at all levels. Yet, the CC is not "an elite affair," but a mass popular movement for a broader distribution of wealth. The CC system needs to coexist with egalitarian policies²⁷ for distribution improvement, notably government social transfers, progressive taxation, dignified living wages for good work, building sufficient social housing, and so forth to prevent gross inequality and injustice. To secure legitimacy, the CC system needs to encompass the democratic decision-making processes to integrate the needs of the most neediest. We must avoid an imposition of top-down planning on the CC and must give voice to those on behalf of whom decisions are made.

In short, the CC platform is a token-based system designed to help re-increase the redistributive power of the welfare state to meet the political goal of poverty reduction. It allows people to share the burdens of sustaining the society in the notion of solidarity and social justice. In a post-petrol economy, it is very likely that we need to reconsider basic needs and our productive capacity to ensure human security and livability. To avoid creating dependency on outside help and resources, the CC ought to be used with the purpose to enhance human capabilities so that people can be self-reliant in the end. The CC also can be used to pay as grants for ecological support activities in line with Accord de Coalition 2018-2023 and public sector reinvestments to improve social protection.

3.4 Meeting challenges of social protection and environmental sustainability

The NASA experts note that 2018 was the forth-warmest year on record.²⁸ Concomitantly, the impact of the climate change on the world economy is surging (e.g. \$91 billion estimated loss in the US alone),²⁹ which suggests a prohibitively high cost for not implementing a green economy. Thus, we must take the climate change threat seriously and start with deep decarbonization of our economy whose processes foster job creation (as evidenced, for example, by reports of the Shift Project and the Colorado-based Rocky Mountain Institute), thereby keeping disaster-proof budgeting.

In Luxembourg, politics can push further the transformation towards cleaner energies by adopting more innovative methods (in technology, regulation, education and social enhancement measures) to create new types of jobs accessible to all as well as new values.³⁰

We also recommend to putting Daly's idea of "degrowth" into practice, as Luxembourg has already embraced such initiatives towards environmental sustainability (e.g. packaging-free organic stores, like

27 cf. Thomas Piketty's complementary analysis <<https://www.lemonde.fr/blog/piketty/2019/07/09/will-money-creation-save-us/>>

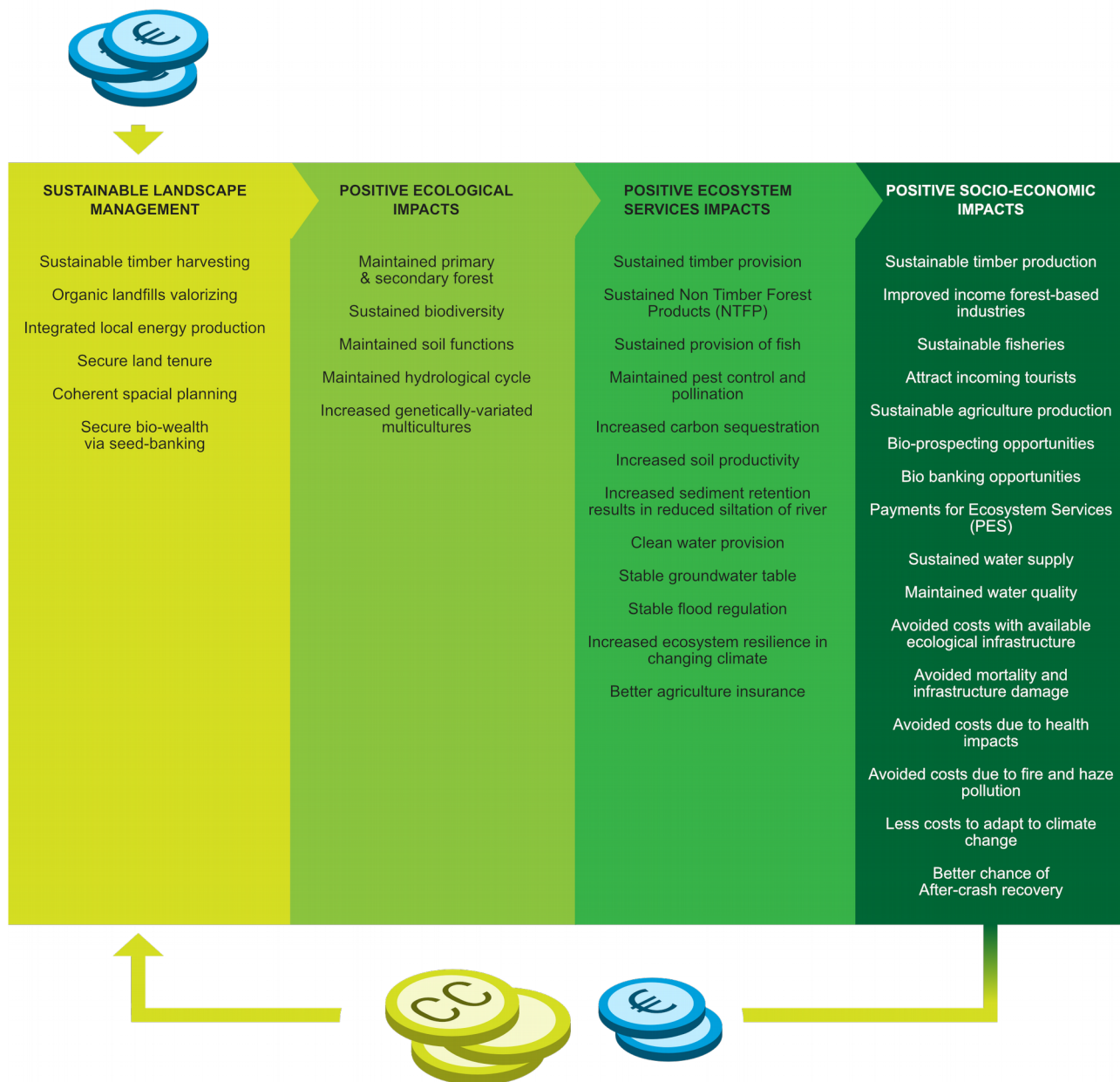
28 <https://www.nasa.gov/press-release/2018-fourth-warmest-year-in-continued-warming-trend-according-to-nasa-noaa>

29 https://www.nasa.gov/sites/default/files/atoms/files/noaa-nasa_global_analysis-2018-final_feb6.pdf

30 For example, see the complementary document titled "The Story of a Green Box and Other Use Cases."

OUNI or LUSH; legislation limiting plastic bags use; Urban Farming plan). Implementing such joint projects must become the norm in Luxembourg.

On the economic front, initiating inclusive projects that are engaging (towards a healthier future) and built to be sustainable and respectful of certain values (now even sported by the youngest generations) will create vast opportunities for strengthening economic security and, from a social point of view, will increase human well-being.



Box 5. A glimpse of what a Green Economy could look like in terms of impact factors and impacts (excerpt)

The above table (cf. Box 5), although deliberately limited to half a dozen factors (listed in the left-hand column) affecting the sustainability of the ecological landscape, shows numerous socio-economic impacts resulting from the activation of a "green" economy. The table also highlights the virtuous circle that such a policy naturally invites. It is clear that activating a plan federating such projects requires the commitment of substantial financial means. However, and this is a key point of our approach, the operational cost will remain under control if the financing, from the initial factors to the intermediate and final impacts, is made in Capability Coupons.

4. Foreseeable potential hurdles to overcome and prospects of gains

Because this sort of endeavor to build a decentralized system to achieve social reinvention would be new to Luxembourg, there may be many types of censorious dismissive opinions, obstacles, and impediments to change, or just indifference. Resistance to change and obstacles are usually impeding this kind of undertaking. Yet, leveraging the experience and help of the associations already in place, many challenges can be overcome. Poverty reduction will rest on a sound infrastructure and political initiative to underline the importance of social purposes of the CC, and to gain public acceptance in a digital token system. In that regard, it is useful to employ a variety of advertising means such as the daily newspapers, magazines, and social media. Community education is equally important to inform people's entitlement and their increased source of income, and encourage them to build environmentally-minded communities. To do so, our political leaders ought to engage in public debates concerning the CC and social welfare.³¹

4.1 Our difference

Creating money appears to be a radical remedy. Yet, scholars, lawmakers, and intellectuals (e.g. Michael Ende) have already proposed a similar non-standard solution.³² Adair Turner, an academic, policymaker, and a former Chairman of the Financial Services Authority in the UK recommends the creation of debt-free money to fund government deficits, although he admits it is impossibly difficult to make such a choice "Between Debt and the Devil" as he entitled his book. Turner writes: "My proposals will horrify many economists and policymakers, and in particular central bankers ... 'Printing money' to finance public deficits is a taboo policy. It has indeed almost the status of a mortal sin."³³ In printing money, some may also raise concerns about hyperinflation in reference to Weimar Republic, Zimbabwe, or other countries.³⁴

A crucial difference separating our proposal from all the others is our guiding vision. Sen's ethics works in the service of the people and not the economy (as a mere means to a human end).³⁵ Lietaer and Dunne point out that social funds "tend to flow toward those businesses that provide the greatest community benefits"³⁶ and that the most striking lies in the very nature of the social money itself that "Unlike ordinary money, [...] flows where it is most needed."³⁷ Hence, this money creation is not to enrich the few at the expense of the many, but to benefit ordinary people and (re)invest in human development, notably jobs, healthcare, innovation, and welfare.

It is no secret that this paper does not place much reliance on economic orthodoxy, particularly neoliberal assumptions and assessments. As the Cambridge economist Chang affirms "The economy is too important to be left to the professional economists alone."³⁸ Interestingly, another economist Herman Daly gives a very similar advice as well.³⁹ In this project, to broaden our perspectives, we bring in various skill profiles and experiences from Luxembourg and from abroad. It is worth noting that the industry has rewarded technical people supporting this proposal for their creativity and a capacity to innovate in solving

31 To help to gain access to the CC system for the most vulnerable groups, it needs to distribute and assign responsibility to the CC members to develop capacity to provide services for others and to train them to learn professional behavior and a code of ethics (e.g., human rights, confidentiality). Since the CC works digitally, it requires people in need to be digitally skilled enough to access to their entitlements. This requires to accommodate them with direct assistance to overcome digital exclusion.

32 They include, for example, Milton Friedman, Ben Bernanke, Jeremy Corbyn, and Marine Le Pen.

33 Cassidy, John. 2015. Printing Money. *New Yorker*. <<https://www.newyorker.com/magazine/2015/11/23/printing-money-books-john-cassidy>>; <<https://www.imf.org/external/np/res/seminars/2015/arc/pdf/adair.pdf>>

34 Ibid.

35 The idea of freedoms entailed in the CA must be differentiated from, say, the neoliberal imperatives of economic freedoms (such as Milton Friedman's notion of *Free to Choose*).

36 Ibid, 194.

37 Stodder, James and Bernard Lietaer. 2016. "WIR Currency — Reinventing Social Exchange." <<http://patternsofcommoning.org/wir-currency-reinventing-social-exchange/>>

38 Chang. 2014. *Economics. The User's Guide*, 331.

39 We also emphasize a vast difference between those who study/practice *oikonomia* (economy as moral philosophy) and those who study/practice chrematistics (the science of wealth). We focus on the former as the makers of genuine durable wealth. See Daly, Herman. 2009. "Incorporating Values in a Bottom-Line Ecological Economy." *Bulletin of Science, Technology & Society* 29: 5.

complex problems pertaining to various domains (e.g. education, environment, health). We believe that building the CC system is a cross-disciplinary endeavor that, for it to prove successful, requires a rich and strong team work. The team needs to grow into an interdisciplinary one to maximize the real potential for both social good and innovation capabilities of Luxembourg.

It is our belief that the CC represents a historic opportunity to open a new door for welfare provisions and public involvement to advance on the green transition, without increasing the debt. As known, some experiments with universal basic income have been undertaken or already underway by some authorities (e.g. Finland, Ontario in Canada, Livorno in Italy, and some Dutch cities⁴⁰). Given our past experiences, we are fairly confident that this digital enterprise has the potential to be widely/globally used and can eventually become a viable alternative to government handouts or public cash transfers. As a sort of living laboratory, Luxembourg being at the crossroad of Europe has a chance to show the way forward in this field to deliver a sustainable future.

4.2 Pressing deadlines

For poverty, urgency is permanently there. For climate, urgency is there. As a collective body, we no longer have the luxury of waiting and seeing whether things can go any better. Yet, although it is our collective responsibility to (re)act, not everyone has the same power and impact with that regard.

In our views, as in the case of the Luxembourg Urban Farming (UF) initiative recently launched by the government, this proposal requires the scheduling of various aspects: social, juridic, economic, technological, business, and operational. At this stage (07/2019), no roadmap is settled.

Yet, according to the UF agenda, adaptations of the relevant legislation and administrative codes are due to start no later than this year, 2019. Some facets of our proposal being connected to UF, we think that, in the case of a marked interest, including these facets as soon as possible in the reflection about the new or revised legislation would make sense.

40 Harari, Yuval Noah. 2018. *21 Lessons for the 21st Century*. London: Penguin Random House, 38.

5. Conclusion

Governments worldwide face many new societal and environmental problems that they try to address by various means. Although Luxembourg is doing fairly well (especially economically) right now, we believe that the country is not immune to the challenges that are about to unfold (i.e. energy/oil crisis, financial sector crises, climate change, a graying population and an inversion of the age pyramid, the widening gap between rich and poor, and the coming economical-, political-, and climatic migrations). Yet, Luxembourg is an example and an engine for Europe and it has the potential to innovate in addressing these issues.

Euro, despite its flaws,⁴¹ is essential to the cohesion of European Union. Nevertheless, operating complementary currencies at a local level makes sense as a social support for providing a better life for all and for enhancing the capabilities (not only the ones of the current generations but also those of the future generations).

In this paper, we have presented an opportunity to initiate a complementary economic system designed to procure a systemic platform to end poverty. At its center, CC tokens seek to create a new dynamic for solidarity-based finance and to offer scaled-up perspectives to social security in the hope of making life better in Luxembourg.

We firmly believe that this proposal can lay the foundation for creating a sustainable “greener” economy and the capacity to deliver social support more effectively so that we can live up to the expected challenges and prepare for future crises and shocks within a more antifragile welfare state.⁴²

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41 For instance, Euro is prone to financial speculation and its stability is mechanically bound to economical growth in a finite world where climate, environment, and natural resources exhaustion all call for degrowth.

42 For more details on the issues discussed in this paper, we recommend this video by NHK: “Michael Ende über Silvio Gesell und alternative Geldsysteme” <<https://www.youtube.com/watch?v=6E8he7kLkRM>>