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**VALIDATING COMPLEMENTARY AND  
COMMUNITY CURRENCIES AS AN  
EFFICIENT TOOL FOR SOCIAL AND  
SOLIDARITY ECONOMY NETWORKING AND  
DEVELOPMENT:**

*The deployment of theory of change approach and  
evaluation standards for their impact assessment*

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Prepared for the special session on Alternative Finance and Complementary Currencies as part of the International Conference on Potential and Limits of Social and Solidarity Economy organized by UNRISD and ILO in cooperation with NGLS and other partners\*

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**UNRISD CONFERENCE**  
**International Symposium on Potential and Limits of Social and Solidarity Economy<sup>1</sup>**  
*Special Session on Alternative Finance and Complementary Currencies*




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**VALIDATING COMPLEMENTARY AND COMMUNITY CURRENCIES AS AN EFFICIENT TOOL FOR SOCIAL AND SOLIDARITY ECONOMY NETWORKING AND DEVELOPMENT:  
the deployment of theory of change approach and evaluation standards for their impact assessment**

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**SUMMARY**

Among multiple strategies, mechanisms and tools for financing development, there exists an alternative, diverse and impactful opportunity called Community and Complementary Currencies (CCC). In order to better evaluate their vision and value on one hand and their operational advantages and risks on the other hand, it is important to define their objectives and secondly to arrive at an understanding of how they induce socio-economic changes. These two stages are necessary for differentiated impact assessment and to ultimately develop a coherent evaluation scoreboard and determine the appropriate legal, regulatory and governance framework for sustained success of these tools in the context of the social and solidarity economy. Indeed, each CCC approach is based on a specific development strategy objective: social, environmental, economic, territorial, community-level, and an efficient evaluation of their needs, limits and potential will allow a better scale-up and replication process. This paper assumes that the objectives of CCC initiatives can be described as adhering to a) an economic dimension, such as economic stabilisation and crisis resiliency; b) a social dimension, such as democratic citizenship engagement, mitigating inequality and needs stemming from demographic changes; and c) an environmental dimension, such as ecological footprint reduction, and local community resilience.

As an empirical approach we propose and practically explore a Theory of Change methodology as a first step towards coherent impact assessment of CCCs to validate their efficiency and strategic effectiveness for the Social and Solidarity Economy networking and development.

**Keywords:** *social and solidarity economy, alternative finance, community and complementary currencies, objective, theory of change, impact assessment, evaluation.*

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## **INTRODUCTION**

For over 15 years, selected complementary currency, community credit and alternative finance initiatives such as the “Transition Currencies” and timebanks in the United Kingdom, the “NU-spaarpas” in Netherland, the “SOL” in France, and “Regiogeld” in Germany and Austria, received support, including financially, from national and international public institutions like City Councils and the European Union’s Cohesion Fund. Most of those Community and Complementary Currencies (CCC) projects, self-positioning themselves as being part of a social movement with the aim to reinforce, develop and expand Social and Solidarity Economy (SSE) networks through market mechanisms and enhanced relations between citizens, non-governmental organisations (NGOs) and/or small and medium sized businesses (SMEs).

Favourable public policy in terms of currency acceptance and emission frameworks in combination with progressing professionalization in the design and implementation of CCCs and a growing academic interest is currently accelerating the spread and proliferation of different currency models and applications around the world. Consequently there is an increasing demand for impact evaluations of such initiatives, which is only being addressed disjointedly and with no referential work available. Different approaches to impact assessment are currently being conceptualized within the CCC movement, all aiming to reveal its high potential for expanding SSE networking and development.

The contribution of this paper is to first review the evolution of categorization and objectives of CCC initiatives and secondly to propose a “Theory of Change” framework for CCC initiatives as a first, organic and bottom-up incremental step towards impact evaluation and standardisations for this innovative field of the SSE.

## 1. CATEGORIZATION AND OBJECTIVES OF CCC INITIATIVES

Looking at the distributed knowledge base of these monetary innovations, one will find a great number of terms, labels and even brand-names describing different CCC models<sup>2</sup> (SCHROEDER, 2011). Increasingly, over the past 8 years, some propositions of typologies and classifications have been made from within the CCC movement such as Siglinde BODE in 2004, Margrit KENNEDY and Bernard LIETAER in 2004, Jérôme BLANC in 2011 and Jens MARTIGNONI in 2012. Each of them has their specificities, providing valuable help to better understand the functioning and purpose of those CCC initiatives, yet none has proven to deliver an exhaustive and satisfactory typology for both theory and practice.

Furthermore, recent reflections about CCCs' objectives and typologies revealed that these reach beyond exchanging differently and with communal sense, conceptualizing the role of money in new ways and creating tools to activate unrealized values. Common motivations and core objectives of such initiatives revolve around strengthening solidarity and sharing in communities, develop local employment and galvanizing the economy (MONNAIE EN DÉBAT, 2011; CAHIER D'ESPÉRANCE RICHESSES ET MONNAIES, 2011; DERUDDER, 2011). Thus, the objectives of CCC initiatives are in correlation with the purpose of expanding SSE networking and development.

### 1.1. Classifications, categories and typologies of CCC initiatives

Community and complementary currencies often appear under different names such as local, alternative, creative, targeted, innovative, vanguard, modern, or impact currencies<sup>3</sup> in order to differentiate themselves from conventional, normal, traditional, standard, ordinary, national or international, legal tender money<sup>4</sup>. Furthermore, in the CCC movement, a lot of specific types are discussed and listed in unsyndicated databases. Systematic attempts of classifications or typologies have only been introduced fairly recently (SCHROEDER, 2011). Some of those classifications focus more on the technical and operational design-features while others also integrate their different objectives, purposes and visions (MARTIGNONI, 2012). It is important to notice that either bilateral barter or multilateral barter as non-monetary systems, without exchange intermediary, are also included in CCC research field. Therefore, recent studies are comparing the efficiency of a barter market (non-monetary) in relation with a regular market (monetary). The whole measurements protocol and simulations are described in the Annex 1 page 13.

**Board 1: comparison of a regular market and a barter market organized as a central limit order book**

<b>Experimentation</b>	<p>An electronic barter market has been developed as a CLOB (central limit order book), accepting orders from owners and producing movements between them. The market allows cyclic exchanges between up to 64 partners, wrapping exchange cycles in atomic transactions.</p> <p>Each value has a particular <i>quality</i> and <i>quantity</i>. A value is only measured by a quantity independently of any monetary reference.</p> <p>Barter orders are expressed by defining the value provided and the value required in exchange.</p> <p>The ratio <math>\omega = (\text{quantity provided})/(\text{quantity required})</math> measures <i>the will to exchange</i> as would do a price on a regular market. This ratio <math>\omega</math> is used to perform competition between possible exchange cycles formed by pending orders of the order book. <math>\omega</math> is expected by an order and produced by movements of exchange cycles.</p> <p>Experimentation has been conducted to observe variations of three indicators for different size of the order book (up to 140 000 orders).</p>
<b>Indicators</b>	<p>The three indicators are defined as the</p> <ul style="list-style-type: none"> <li>▪ <i>delay</i> that is the mean execution time of an order for computing the time to get the results ;</li> <li>▪ <i>fluidity</i> of the market that is a measurement of its capacity to drain values out of the order book reached by the ratio between the output flow of values produced by movements and the input flow of values offered by orders submitted to the order book. Flows of value are obtained by summing quantities of values for all qualities ;</li> <li>▪ <i>gain</i> that measure the profit made by the transaction from the ratio between <math>\omega</math> produced by movements and <math>\omega</math> expected by the corresponding order.</li> </ul>
<b>Conclusion</b>	<p>Experiences show that the fluidity and opportunities of both cooperation and profit are better with the barter market than with a regular market. Non-bilateral cycles increase cooperation for low book volume while maintaining competition for higher volumes.</p> <p>A threshold of fluidity is observed when the volume of the book increases depending on the diversity of qualities of the market. We observed that the threshold is reached by the barter market before the regular market. One of the reasons could be that barter order contains both offer and demand while regular order is "buy or sell" containing only one of them. We noticed that the profit is larger on a barter market than on a regular one but the explanation of this fact needs further investigation.</p> <p>It is hence possible to develop barter market with large order book spending limited computation resources.</p>
<b>Utility of an electronic barter market</b>	<p>Historic monetary crisis used to come with empiric barter economy that leads to poverty. But the internet and new power of computation helps now barter market to emerge in a new way. In addition the ecological crisis requires a worldwide economy that cannot be achieved with this form of empiric practices. For the time we will count any resources as scrupulously as we do now with money, electronic barter markets are necessary to maintain the fragile equilibrium. Ecological regulation cannot be threatened by a potential financial collapse.</p> <p>Limits of social and solidarity economy could be redefined by the use of this kind of electronic barter market that reconsiders the quality of values produced by communities.</p>

Source: DEMONTALIVET Vincent. CHAUSSAVOINE Olivier. MyRecycleStuff, 2013.

<sup>2</sup> Banche del Tempo, Banco Palmas, Bancos del Tiempo, Barter Systems, Bia Kud Chum, Constant, Double Triangle Scheme, Earth Day Money, Eco-Money, Free Money, Friendly Favors, Fureai Kippu, Green Dollars, Hansatsu, Hours, Jardin d'Echange Universel, Labour Note, Local Exchange Trading Scheme, Q-project, Regiogelder, Scrip Currencey, Système d'Echange Local, Seniorengenossenschaften, Talentum, Tauschringe, Tauschzentralen, Tianguis Tlaloc, Time Bank, TimeCredits, Trueque, Wära, WAT, WIR, and others.

<sup>3</sup> Sometimes also called alternative, complementary, community, local, allocated, social, mutual aid, support, green, plural, parallel, virtual, occasional, exceptional, value added, dynamic, exchange trading system or other.

<sup>4</sup> Sometimes also called classical, legal, official, dominant, institutional, current, common, regular, mass, centralized, scarce money and other.

One of the first classification, proposed by Siglinde BODE in 2004, is mainly based on a business approach where money and currencies appear as a medium of exchange between businesses (B) and customer (C), which provides a clear comprehension of functionality but not necessarily of their objective, purpose and vision. She also introduces the terms “service-backed” as a CCC type where the currency is issued against a promise to render services whereas “currency-backed” is a CCC type which is exchanged for conventional money, which in turn is deposited in an account as backing and guarantee potentially for later redemption.

**Board 2: classification of complementary types according to Siglinde Bode (2004)**

CC-Type	Relationship	Payment system	Backing
Local Exchange Trading Scheme	Mainly C2C	Closed	Service-backed
Barter Club	Mainly B2B	Closed	Service-backed
Voucher System	Mainly B2C (also B2B)	Open	Currency-backed

Source: MARTIGNONI Jens. A new approach to a typology of complementary currencies. *International Journal of Community Currency Research* 16, 2012.

A second classification proposition, made by Margrit KENNEDY and Bernard LIETAER in 2004, is more specific and detailed and aims to establish a scheme for classifying all forms of currency. They emphasise that there is a great variety of currency experiments and the importance to distinguish their concepts in order to simplify their comprehension and deployment. The many mixed criteria employed in this typology create a complex classification and already incorporate the ideas of objectives, differentiated as “legal tender, commercial or social purposes”.

**Board 3: typology of currencies after Kennedy /Lietaer (2004)**

Main Classification	Purpose		Medium	Function		Money creation process	Cost recovery
	Commercial	Social		Means of Payment	Medium of Exchange		
Specification			Commodity money. Coins. Paper. Electronic money. Hybrid forms	Measure of Value	Store of Value	Real backing. Secured loans. Unsecured loans. Redeemable vouchers. Corporate loyalty currency. Mutual Credit. Central issuance (fiat). Hybrid forms.	No additional cost recovery. Fixed fees. Transaction fees. Interest charges, demurrage and other. Time-dependent charges. Hybrid forms
Finer Gradations	B2B. B2C. C2C. C2B	Elderly care. Pensioners. Unemployed. Education. Babysitting. Social contact. Cultural identity. Ecology. Other social objectives. Hybrid forms	-	Payment in conventional currency. Payment in units of time. Payment with concrete objects.	Interest-bearing currencies. Interest-free currencies. Currencies with user fee. Currencies with a specific value in units of time. Currencies with expiry date. hybrids	-	-

Source: MARTIGNONI Jens. A new approach to a typology of complementary currencies. *International Journal of Community Currency Research* 16, 2012.

A classification proposition, made by Jérôme BLANC in 2011, adds an historic evolution of CCC generations to the information on operational approaches and objectives. The purpose of different CCC-types is differentiated into “defining, protecting, strengthening, stimulating, and orientating a community, a territory, or the economy”.

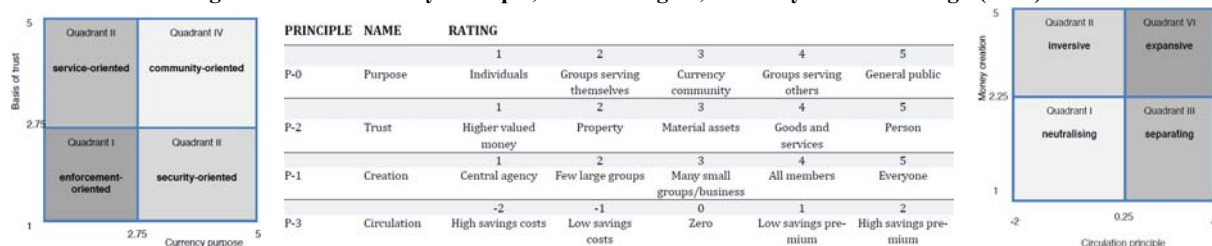
**Board 4: ideal-types of currency schemes & community currency generation (2011)**

Denomination & Currency scheme type	Nature of projects & Space considered	Purpose & Guiding principle	Generation & Significant Case	Content overview
<b>Community currency</b>	Community & Social space (pre-existing or ad hoc community)	Defining, protecting and strengthening a community & Reciprocity first, various distance to market	G1 & LETS. Trueque. CES.	Inconvertible schemes; quite small openness to external economic activities
		Defining, protecting and strengthening a community & Reciprocity first, various distance to local governments	G2 & Time Banks. Accorderie.	Inconvertible schemes with time currencies; frequent partnerships, especially with local governments
<b>Local currency</b>	Territorial & Geopolitical space (territory politically defined)	Defining, protecting and strengthening a territory & Redistribution or political control. Market first; generally distant from local governments	G3 & Ithaca Hours. Regio. Palmas. BerkShares.	Convertible schemes; local businesses are included; interest of partnerships with local governments
<b>Complementary currency</b>	Economic & Economic space (production and exchange)	Protecting, stimulating or orientating the economy & Market first, with links to governments and reciprocity	G4 & NU. SOL.	Complex schemes oriented toward consumer responsibility or/and economic activities re-orientation and other purposes; partnerships are necessary
<b>National currency</b>	Territorial & Sovereign space	Sovereignty & Redistribution or political control	-	-
<b>For-profit currency</b>	Economic & Clients of a for-profit organization	Profit & Purchasing power capture	-	-

Source: BLANC Jérôme. Classifying "CCs": Community, complementary and local currencies' types and generations. In: INTERNATIONAL CONFERENCE ON COMMUNITY AND COMPLEMENTARY CURRENCIES, 1., 16<sup>th</sup> and 17<sup>th</sup> of February 2011. Lyon. Article. Lyon: CC-CONF, 2011.

A fourth classification proposal, made by Jens MARTIGNONI in 2012, is based on basic currency concept (purpose and trust) and technical design issues (creation and circulation). Thus it give presents both and approach by operational categories and objectives.of CCC types<sup>5</sup>. In the dimension of principle or purpose, it differentiates between self-oriented, serving individuals, and others-oriented, serving everyone.

**Figure 1: basic currency concepts, evaluation grid, currency technical design (2012)**



Source: MARTIGNONI Jens. A new approach to a typology of complementary currencies. International Journal of Community Currency Research 16, 2012.

Thus, these different classifications of CCC initiatives agree in their approach to objectives of CCCs as follows:

**Board 5: objective approach of CCC initiatives according to their classification**

<b>Margrit KENNEDY / Bernard LIETAER (2004)</b>	Social	-	Commercial
<b>Jérôme BLANC (2011)</b>	Community	Territory	Economy
<b>Jens MARTIGNONI (2012)</b>	Others-oriented (serving everyone)	-	Self-oriented (serving individuals)

CCC initiatives seem to have the same objective of « serving everyone » and being « others-oriented » as SSE. By further studying the objectives of CCC initiatives we will try to position and validate CCC initiatives as an efficient tool for SSE networking and development.

The presented classifications, despite their different approaches, all integrate the objectives of CCCs into their typology approach and thus point to the importance of impact as an relevant category. Beyond their complex operational systems and technical designs as alternative financing mechanism, CCCs have a genuine strategic objective linked to a sustainable and ethical vision. That's why, recently, the CCC movement starts to focus on this objective approach as we will study below.

<sup>5</sup> Basic design (purpose and trust): enforcement-oriented (money is seen as a means of enforcing (private/group) interests. The goal of unlimited personal enrichment is allowed), service-oriented (money is seen as a means for exchanging service. Personal relationships as an exchange of services), security-oriented (money is seen as a store of value, to be made secure, also through investments in property and assets), community-oriented (money is seen as an important community builder and means for personal development)

Technical design (creation and circulation): neutralizing (manageable systems with a tendency to offset inequalities), inversive (more complex systems, good management necessary, the tendency to shrink must be actively dealt with), separating (systems with strong growth that also create and promote inequalities, only limited control, possible), expansive (systems with a strong expansion drive, difficult to manage, regulation is done by regular collapse (today's stock market money-creation)).



## 1.2. Objectives of CCC initiatives

During the International Conference on Community and Complementary Currencies which took place in Lyon in February 2011, different objectives of CCC initiatives were discussed: exchange differently with purpose, conceptualize money differently, and as a tool employed for a specific project. Emerging questions were: what exchanges do we want to promote? Between who? For what? How? And to what extent should community and complementary currency develop into a vocation?

**Board 6: objectives of community and complementary currencies initiatives**

Initiative		Objective
Services Exchange & Mutual Aid (Système d'Échange Local. Time Bank. Accorderie. Community Exchange System. SOL Temps)		Encourage time and knowledge exchange
		Strengthen solidarity and sharing
Economic Development (C3 Circuito Crédito Comercial. WIR. SUCRE. RES)		Catalyst to economic exchange development
		Business to Business economic exchange development
Solidarity, Social and Local Economy	Local Economy (Transition Town. Abeille. Bon Netz Bon. Monnaie Complémentaire Locale. Regiogeld. SOL-Eco)	Exchange relocation Economic development resilience through relocation. Employment and solidarity economy development. Energize citizen life. Reduce ecological footprint.
	Social Economy (Banco Plamas. Community Bank Network)	Support of income and employment generating activities Dynamize economy and territory solidarity
	Solidarity Economy (Trueke. Clubes de Trueques)	Make exchange possible Population needs satisfaction. Responsible consumption. Planet & Human respect.
Eco-Friendly Behaviour Development		Positive valuation of citizen and ecological conscience, practise, gesture, behaviour (carpool, energy saving, waste recycling)
		Collective visibility and society recognition
		Reintegration of larger exchange circuit
Hybrid forms		Local economic exchange
		Mutual aid, service and time exchange between people
		Affected public politic. Eco-citizen behaviour.

Source: MONNAIE EN DÉBAT. Synthesis of the international day. In: MAKE MOTION – COMMUNITY AND COMPLEMENTARY CURRENCIES ACTORS, 1., 18<sup>th</sup> of February 2011. Lyon. Synthesis. Lyon: MONNAIE EN DÉBAT, 2011.  
CAHIER D'ESPÉRANCE RICHESSES ET MONNAIES. Cahier d'espérance pour un autre regard sur la richesse et la monnaie. In: ÉTATS GÉNÉRAUX DE L'ÉCONOMIE SOCIALE ET SOLIDAIRE, 1., 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> of June 2011. Paris. Synthesis. Paris: PALAIS BRONGNIART, 2011.

**Board 7: objectives by actors of community and complementary currencies initiatives**

Actors	Economic	Social	Environment
Producer Provider	Turnover/Sales Client Loyalty Value-Added	Encourage Local Exchange Give Sense to Activity Keep Wealth Circulation Locally	Label Network Integration Relocation Network Activation
Consumer User	Value & Wealth Recognition Ethical Use of Money Sustainable Purchasing Power	Re-appropriation & Co-creation of Money Use Confidence. Openness. Sharing. Rethink. Neighbourhood.	Connect Autonomous Transition Initiative Become Consum'Actor
Stakeholder Institutions	Crisis Resiliency Orientation & Promotion of Local & Sustainable Development Viability & Perennial	Territorial Services – Unsatisfied Needs meet Unused Resources Social Services – Financial Inclusion	Socio-Environmental Profit Behaviour Change Incentive Eco-Citizen Happy Sobriety

Source: MONNAIE EN DÉBAT. Synthesis of the international day. In: MAKE MOTION – COMMUNITY AND COMPLEMENTARY CURRENCIES ACTORS, 1., 18<sup>th</sup> of February 2011. Lyon. Synthesis. Lyon: MONNAIE EN DÉBAT, 2011.  
CAHIER D'ESPÉRANCE RICHESSES ET MONNAIES. Cahier d'espérance pour un autre regard sur la richesse et la monnaie. In: ÉTATS GÉNÉRAUX DE L'ÉCONOMIE SOCIALE ET SOLIDAIRE, 1., 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> of June 2011. Paris. Synthesis. Paris: PALAIS BRONGNIART, 2011.

DERUDDER Philippe. LEPESANT Michel. Monnaie locale complémentaire éditorial, 2011.

**Board 8: scale change of community and complementary currencies initiatives**

Objective	Description
Collaborative & Cooperative Vector	Alliance logic and strategy within solidarity and social economy and with sustainable development actors
Sustainable Local Development	Stakeholders integration and recognition in a common development project
	Partnership co-creation between companies, associations, citizens and local authority
Innovative Wealth Valuation	Acceptance and organization of the connection between profit and non-profit wealth such as voluntary work
Social Protection Systems Preservation	Support, impulse, reinforce, participation to time, knowledge and local exchange systems
	Conceive innovative accountancy scheme and account unit
Ethic Currency Constellation	Sustainable and non-speculative worldwide complementary currency
	Common but non-unique European currency
Monetary Creation Power to Public Actors	Territorial community currency (national, regional or local)

Source: MONNAIE EN DÉBAT. Synthesis of the international day. In: MAKE MOTION – COMMUNITY AND COMPLEMENTARY CURRENCIES ACTORS, 1., 18<sup>th</sup> of February 2011. Lyon. Synthesis. Lyon: MONNAIE EN DÉBAT, 2011.  
CAHIER D'ESPÉRANCE RICHESSES ET MONNAIES. Cahier d'espérance pour un autre regard sur la richesse et la monnaie. In: ÉTATS GÉNÉRAUX DE L'ÉCONOMIE SOCIALE ET SOLIDAIRE, 1., 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup> of June 2011. Paris. Synthesis. Paris: PALAIS BRONGNIART, 2011.

DERUDDER Philippe. LEPESANT Michel. Monnaie locale complémentaire éditorial, 2011.

Furthermore, we benefit from the following field experimentation case of transborder franco-valdo-genevois region<sup>6</sup>.

**Board 9: implementation key success factors of a CCC in a SSE network through an operational, structural and organizational analysis**

Key Success Factors	Operational, Structural and Organizational analysis
Stakeholders access to suitable CCC initiatives informations	Clear aims and objectives
Clear concept of CCC value and use within the community	Utility for stakeholders membership
SSE network commitment	Alternative vision for the regional economy dynamic
Complementarity in front of the financial market	Creation of a common identity
Financial crisis	Financial autonomy development
Values awareness among business ethic and sustainable finance	Effective stakeholders and volunteer engagement
Exchange resiliency	Social cohesion in the SSE network
Public power support	Recognition, credibility and legitimacy

Source: NGINAMAU Maria. Feasibility study of complementary and community currency implementation within a social and solidarity economy network. Master of Science Dissertation in Services Engineering and Management. Geneva: Geneva Business School of Administration, 2013.

COMMUNITY FORGE. Grand Genève: une monnaie solidaire. Étude de faisabilité d'une monnaie complémentaire pour Genève et Région. Geneva: COMMUNITY FORGE, 2013.

Thus, utility, interest, engagement and motivation for CCC initiatives depend on each actor's perception and on each sustainability dimension indicated. Consequently, all CCC initiatives by their actors, scale and classification, as shown above, have specific objectives that can be divided through economic, social and environmental dimensions.

**Board 10: objective approach synthesis of community and complementary currencies initiatives by dimensions and levels**

Dimension	Level	Objectives
Economic	Meta	Crisis Resiliency with Currency Constellation
		Make Exchange Possible
		Unsatisfied Needs meet Unused Resources
	Macro	Socio-Environmental Accountancy Scheme
		Externalities Internalisation
		Sufficient, Efficient and Appropriate Tool
	Meso	Conurbation and Regional Exchange Development
		Income, Employment and Activities Generating
		Financial Inclusion & Credit Clearing
	Micro	Local Economic Actor Liquidity
		Turnover/Sales
		Client Loyalty
Purchasing Power		
Value-Added		
Social	Meta	Public Monetary Creation as a Common Good
		Collaborative and Democratic Governance
		Open Code and Legality
	Macro	Public Debt Reduction
		Public Services Increase
		Social Protection Preservation
	Meso	Non-Speculative Economy Circulation
		Needs Satisfaction
		Voluntary Work Valuation
	Micro	Consumer-Producer Link Reinforcement
		Citizen Engagement Stimulation
		Stakeholder Recognition
Value Co-Creation and Cooperation Sharing Vector		
SSE Network Activation		
Keep Wealth Locally		
Environment	Meta	Others-oriented
		Relocation
	Macro	Transition and Autonomy: Encourage Community
		Local, Time and Knowledge Exchange
	Meso	Ecological Footprint Reduction & Eco-Citizen Behavior Incentive: Consumption Reduction, Energy Saving, Waste Recycling, Biodiversity Rehabilitation, Organic Agroforestry, Water Conservation, Ethical Banking, Sustainable Investment...
	Micro	Eco-responsible Consumption Motivation & Label Network Integration:
		Fair Trade, Organic Products, Eco-Friendly...

Furthermore, we should separate and thus integrate a fourth dimension linked with political issue such as democracy and governance. Indeed, in CCC movement, the question of participative governance and collaborative tool for election and decision is primordial.

<sup>6</sup> Indeed, Maria NGINAMAU and Christophe PLACE are part of the citizens supporting the current feasibility study of local complementary currency for Genevan region through its collaborative space.

**Board 11: importance of participative governance and collaborative tool for CCC initiatives in a SSE network**

<b>Potential</b>	Complementary currencies have the potential to catalyse the emergence of SSE. This is because they can be used to create a network connecting the different structures composing it. Currencies are an essential component of any type of economy including SSE. All are using currencies and are therefore affected by any changes in its architecture. For this reason it is of utter importance to ensure a participatory management of such complementary currency. In other words, one has to design its governance in a way that allows all users and stake holders of the complementary currency project to be involved in the decision making.
<b>Case Study</b>	Such innovative type of management are being experimented in various projects including SOL Violette in Toulouse. In their case they have set up 5 committees representing the various stake holders. Each committee elects their representatives to seat in the central strategic circle. For such a type of currency it is also essential to remain in contact with its everyday users. Both the SSE structures and the users if it is a B2C. Once again, participatory methods have been used in Toulouse to bring up all the difficulties, dysfonctionnement and allowing them to adjust the currency to better fulfill its objectives.
<b>Conclusion</b>	To conclude, if one wants to design a complementary currency for SSE it must be in tune with its fundamental values. Those are : equivalence in decisions, transparency and high level of participation. For these reasons complementary currencies have all the criteria to support the emergence of SSE.

Source: BRIET Nicolas. L'émergence des monnaies complémentaires en Rhône Alpes et Suisse – co-créons une finance durable et équitable. In: 4ème RENCONTRES ÉCO-CITOYENNES DU TIOCAN, 29<sup>th</sup>, 30<sup>th</sup>, and 31<sup>st</sup> of March 2013. Thoiry. Synthesis. Thoiry: ASSOCIATION OBJECTIF GAÏA, 2013.

MAIRIE DE TOULOUSE. Bilan Sol Violette – évaluation du dispositif de la monnaie éthique toulousaine. Toulouse: Formation Locale et Internationale de l'Économie Solidaire, 2012.

From the board above we could extract a fourth political dimension:

**Board 12: objective approach synthesis variant of community and complementary currencies initiatives by dimensions and levels**

Dimension	Level	Objectives
Politic	Meta	Collaborative and Democratic Governance
	Macro	Transition and Autonomy: Encourage Community
	Meso	Citizen Engagement Stimulation
	Micro	Stakeholder Recognition
Economic	Meta	Crisis Resiliency with Currency Constellation
		Make Exchange Possible
		Unsatisfied Needs meet Unused Resources
	Macro	Socio-Environmental Accountancy Scheme
		Externalities Internalisation
		Sufficient, Efficient and Appropriate Tool
		Conurbation and Regional Exchange Development
	Meso	Income, Employment and Activities Generating
		Financial Inclusion & Credit Clearing
		Local Economic Actor Liquidity
	Micro	Turnover/Sales
		Client Loyalty
Purchasing Power		
Value-Added		
Social	Meta	Public Monetary Creation as a Common Good
		Open Code and Legality
		Public Debt Reduction
	Macro	Public Services Increase
		Social Protection Preservation
		Non-Speculative Economy Circulation
		Needs Satisfaction
	Meso	Voluntary Work Valuation
		Consumer-Producer Link Reinforcement
		Value Co-Creation and Cooperation Sharing Vector
	Micro	SSE Network Activation
		Keep Wealth Locally
Others-oriented		
Environment	Meta	Relocation
	Macro	Local, Time and Knowledge Exchange
	Meso	Ecological Footprint Reduction & Eco-Citizen Behavior Incentive: Consumption Reduction, Energy Saving, Waste Recycling, Biodiversity Rehabilitation, Organic Agroforestry, Water Conservation, Ethical Banking, Sustainable Investment...
	Micro	Eco-responsible Consumption Motivation & Label Network Integration:
		Fair Trade, Organic Products, Eco-Friendly...

Furthermore, different objectives approaches are currently being conceptualized within the CCC movement, all aiming to reveal its high potential for expanding SSE networking and development on the territorial and community-level.

*“Achieving their objectives of community-building, creating more localised economies and helping the unemployed to participate in productive activity, the finding is that local currency systems represent a potentially powerful new weapon in the armoury of community development agencies.” (WILLIAMS, 1996)*

As we defined the types and thus the objectives of the complementary, local, community currencies, we now need to find the appropriate and differentiate evaluation strategies to coherently assess the impact of CCC.

## 2. AN EVALUATION FRAMEWORK FOR THE IMPACT ASSESSMENT OF CCC INITIATIVES

Impact assessment deals with both, program evaluation to measure the quantitative output of an activity and impact evaluation to verify the qualitative outcomes of a mission (UPEACE, 2011).

In 2012, first impact measurement indicators and impact assessment scorecards have been proposed in the context of CCC (COLLOM, 2012; PLACE, 2012). Acknowledging these in lending important orientation towards the development of standards, we here propose that it is necessary to first consider the differences of objectives and targeted outcomes of the different CCC models and initiatives en-route to develop comprehensive evaluation tools. To this end we will propose a Theory of Change framework for the incremental development of a coherent set of indicators across different CCC systems.

Reporting indicators and monitoring systems based on scorecards and dashboards, ultimately, are comprehensive methods for collecting, analyzing, and using information to answer questions about projects, policies and programs, particularly about their effectiveness and efficiency. They assess the changes that can be attributed to a particular intervention, both the intended ones, as well as ideally the unintended ones. They can involve both quantitative and qualitative methods of environmental and social research of different backgrounds such as economics, politics, cultural, sociology, anthropology, philosophy and psychology domains.

But lending to the wide variety and high diversity of CCC systems already in use and the constant adaption and innovation in this field, any set system for monitoring and evaluation needs to balance coherency to be comparable across different currency models yet flexible to mirror the specificities of the initiative at hand. Furthermore, due to the diversity of stakeholders and objectives of CCC systems, standardisations towards scorecards or dashboard systems need to be approached in a bottom-up fashion, first querying a wide number of individual currency systems before deriving common sets of indicators.

However, evaluation standards for the impact assessment of CCC systems have three main objectives:

- Global legitimacy for development projects by proving its impact efficiency: to demonstrate that monetary innovations improve the social and environmental transformation impact of development projects.
- External visibility for impact finance by attracting funders and supporters: to bring credibility and legitimacy to financing institutions by analysing their impact efficiency thanks to impact reporting dealing with monitoring and evaluation systems and performance indicators.
- Internal viability and improvements for monetary innovation by improving the currency design implementation: to incentive confidence and coherences in the implementation and design of the monetary innovation tool for impact insurance.

Moreover, in a period of crisis, the effectiveness and efficiency of interventions in providing resiliency makes impact assessment essential to evaluate performance.

**Figure 2: interdependence between financing, impact assessment and project development**



Source: PLACE Christophe. Impact assessment of economic and monetary innovations for their financing and improvement: why is it necessary for social transformation projects management? In: INTERNATIONAL SOCIAL TRANSFORMATION CONFERENCE, 10<sup>th</sup> to 12<sup>th</sup> of July 2012. Split. Article. Split: TESLA CONFERENCE, 2012.

To this end we are proposing a Theory of Change methodology for the establishment of increasingly coherent, widely recognised and differentiated evaluation and Impact Assessment standards for CCCs, in order to increase their global legitimacy, external visibility, and internal viability as efficient impact tools to expand the SSE.

## **2.1. The “Theory of Change” methodology**

The Theory of Change (ToC) methodology has emerged from the theoretical and practical developments in evaluation research since the 1990s and is regularly employed in the mapping of complex interventions particularly in the social and developmental sphere (ANDERSON, 2005). ToC refers as much to the finished product, an explanatory model of how an intervention reaches its set objectives, as to the development or determination of such models in (multi-) stakeholder processes. A ToC framework also serves as a first stage of impact evaluation approaches as it allows for shared determination of relevant indicators and it is, as such, a standard building block to other methodologies like Social Return on Investment (SROI) evaluations.

In general one can distinguish two use cases in which a Theory of Change approach is commonly applied. On the one hand, it serves as a forward-looking project or intervention-planning tool, on the other hand it is an analytical, backwards-looking project description and communication tool. Both scenarios can serve as a building block for evaluation, depending on when monitoring and evaluation is commissioned. Often, the tangible outcome of a Theory of Change process is a flow-chart diagram that illustrates what short, medium and long-term outcomes have been achieved by an intervention or are expected to be achieved respectively. The interactions between these outcomes are mapped in a temporal manner, portraying earlier changes as the preconditions for later and possibly more high-level outcomes/changes.

In addition to the direct outcomes of an intervention, the external conditions of a project, sometimes referred to as “enablers” and “preventers”, can be explicitly explored or implicitly uncovered. In the same way, one of the strong advantages of a Theory of Change approach and process is that many unarticulated and even unconscious assumptions are surfaced tested for their relevance to the project or intervention (VOGEL, 2012). This is of course increasingly important the more different stakeholder groups are involved in a project. And since many CCC initiatives aim to and need to be more inclusive and collaborative than conventional projects, divergent assumptions and individual motivations of different stakeholder(-groups) are a hazard to the success and sustainability of the initiative. Typically developed in participatory workshop settings, the Theory of Change methodology allows for the involvement and consideration of all potential stakeholder groups of a project or to the degree that the evaluation mandate determines. Apart from the internal clarity, this process also serves to hone targeted and realistic communications towards different audiences, such as funders, users and policy makers.

The benefits of a ToC framework for the incremental and peer driven development of general indicators and quality standards for the impact evaluation of CCCs in summary:

- 1) It is applicable at various stages of development of a given system or initiative;
- 2) It is supportive to the design, communications and validation processes of currency initiatives through a focus on the clear articulation of objectives and assumptions;
- 3) It is compatible and well established for different stakeholder situations and sectors (grass-root, non-profit, commercial, public).
- 4) adaptable to self-driven, facilitated or commissioned evaluation efforts
- 5) valuable as a stand-alone product and as an integrated or complimentary building block of other evaluation methods (e.g. SROI)
- 6) pre-requisite for a peer driven development of general evaluation and quality standards (such as scorecards) of CCCs

## **2.2. Action-Research on a “Theory of Change” framework for CCC systems**

The objective of the proposed framework is to provide the conceptual guideline and terms of reference to enable currency initiatives to incorporate the ToC methodology into their project processes at any stage.

In the context of an ongoing international EU-Interreg co-funded, cross-sectorial collaboration project around the consolidation of complementary currency tools (COMMUNITY CURRENCIES IN ACTION, 2012 this framework proposal is currently being validated and improved through its application to eight conceptually different currency projects across north-western Europe.

The different CCCs piloted in the CCIA partnership represent a challenging array, which can be seen as reflecting the overall features of the CCC field in general in terms of different objectives and target populations. Also, the pilot projects are at different stages of development with some projects already having a well-developed monitoring and evaluation framework in place or under development while others are still at their inception phase.

With all pilot currencies of the project a ToC workshop will be conducted with different stakeholder constellations and at the different project phases to explore its validity and flexibility in face of the dynamism and diversity of CCC systems. From the Theory of Change flow-charts, as shown in Annex 2 page 14, sets of indicators can be derived, specific to that CCC and its individual objectives. It is expected that in overlay of the indicators from different currencies a set of general and another set of specific indicators can be derived. This will inform the design of future evaluation standards and scorecard systems. From this conceptual and action research driven approach we expect to ultimately derive the impact evaluation standards necessary to validate CCCs as appropriate and effective tools for the sustainable expansion and appraisal of the SSE.

Preliminary finding from the unique data set of this work in progress will be presented in the final version of the working paper.

## **CONCLUSION**

Turning to an objective based differentiation of different CCC systems, we have identified them and wide ranging socio-economic tools in wide overlay with the objectives of the SSE. Covering the economic, social and environmental dimensions, CCCs are proposed as an effective and efficient tool for expand and deepen the development of the SSE.

However, for general legitimacy, external visibility, and internal viability, CCCs require a comprehensive theory and practice of evaluation and impact assessment to live up to their promised potential by attracting sustained funding and support and to scale-up and replicate.

For an organic bottom-up development of such evaluation standards we are proposing and currently validating through practical applications, a Theory of Change methodology which serves as a flexible tool to derive adequate indicators for specific impact objectives of different CCCs, in a coherent manner. At the same time, a Theory of Change approach helps to understand and promote CCCs through improved clarity on their impact assumptions and incremental effects.

This research in progress will be expanded over the coming month and the full paper will be presented at the 2<sup>nd</sup> International Conference on CCC Systems in June 2013 in The Hague, Netherlands.

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## Annexe 1: regular market vs barter market: measurements protocol and simulations

### Measurements protocol

The order book is filled with N barter limit orders where  $\omega$  is chosen randomly using a continuous uniform distribution between 0.5 and 1.5, and where the quantity provided is 10 000. The input flow is 10 000 (the quantity provided) \* 1000 orders = 10 000 000, and the output flow is the sum of quantities brought by movements.

The protocol used to explore different size of the book is the following:

A large external order book is created with the desired statistic. For each book size, the beginning of this external book is chosen to be the set of pending orders of the real order book of the given size. The table of movements is cleared. A set of barter limit orders is submitted to the book. The number of elements of this set is (S). Results presented are means of results obtained.

Assuming that constants to limit computation load are:

- The maximum number of movement per cycle (Y),
- The maximum number of movement per transaction, since a transaction can wrap several cycles (M),
- The maximum number of cycle explored (P).

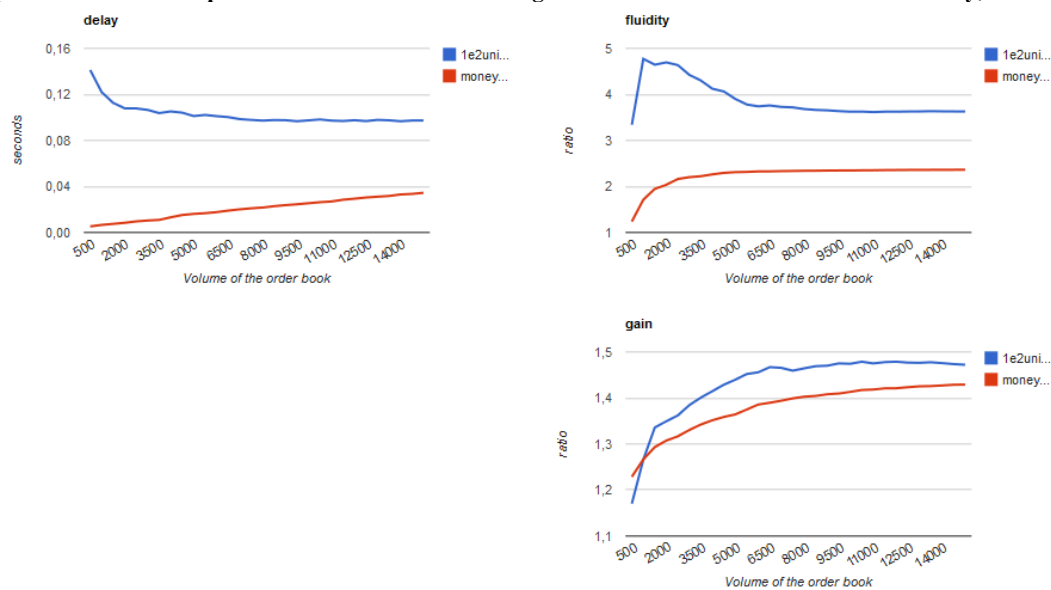
### Simulations of barter and regular market

To simulate the behavior of a regular market with the scenario *money* we consider a special quality used by all orders, as on a regular order book where a sell order asks for € and a buy order offers €. The quality that is not € is chosen randomly with a uniform distribution between 99 other qualities. Cycles are limited to two partners with Y=2.

A second scenario barter called *1e2uni* is made of barter orders where the diversity of quality is 100 with a uniform distribution.

For the *1e2uni* scenario, S=100, Y=64, P=1024\*10, M=128;  
 and for the *money* scenario, S=100, Y=2, P=1024\*10, M=128.

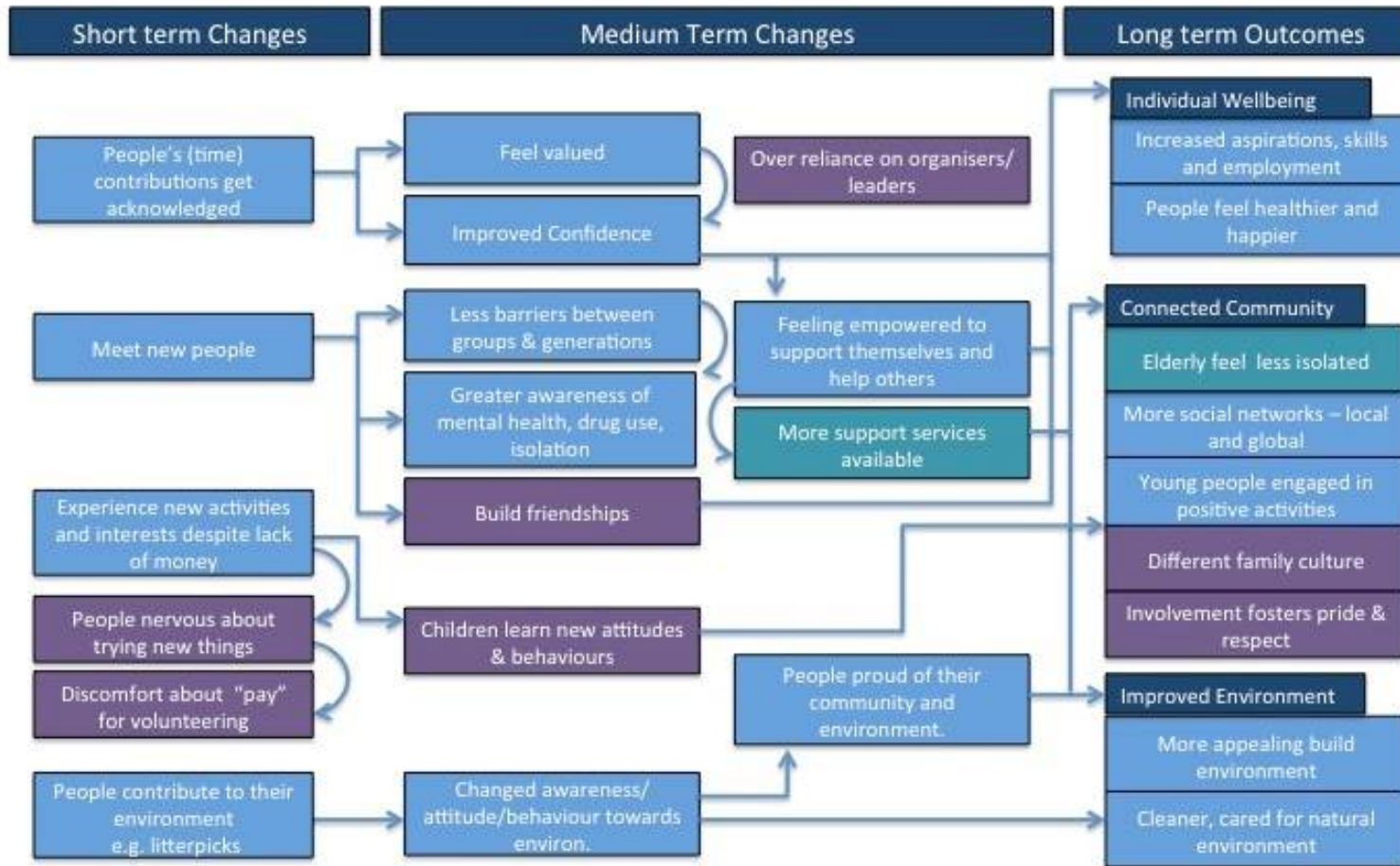
**Graph 1: measurements protocol and simulations of a regular market versus a barter market: delay, fluidity and gain**



Source: DEMONTALIVET Vincent. CHAUSSAVOINE Olivier. MyRecycleStuff, 2013.

**Annexe 2: example of a Theory of Change Flow Chart for TimeCredit Currencies**

**Theory of Change: Summary of two TimeCredits Currency Systems**



\*Reported in Currency A only

\*Reported in Currency B only





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