

# Circular Wealth Wales Report



Proposals for a Mutual  
Credit System for Wales

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**Circular Economy Wales**  
Economi Gylchog Cymru



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## PREFACE:

The following report, *'Circular Wealth Wales—Proposals for a Welsh Mutual Credit System'* was produced by Eifion Williams of Circular Economy Wales CIC, supported by the Rank Foundation, the Winston Churchill Memorial Trust and the Welsh Government. The aim of setting up a Mutual Credit system for Wales, outlined within this report, is being put forward by Circular Economy Wales CIC, to the Government and the people of Wales. The conclusions and proposals set out in this 3-Part publication are informed by a Churchill Fellowship study visiting six different 'Complementary Currency' models operating in six different European regions.

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MARCH 2019

First edition published in Wales in 2019 by  
Circular Economy Wales CIC  
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## Opening Pages:

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DEDICATED TO:

CURRENT AND FUTURE GENERATIONS OF WALES

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## **(i) With special thanks to the following people and organisations:**

The Winston Churchill Memorial Trust, The Rank Foundation and their teams who took the initial decision to invest in this report. They gave a priceless opportunity to take time out of a busy workload to pursue the work carried out in this report in six regions of the EU.

Mark Drakeford, Welsh Government First Minister  
for his suggestions when scoping the aims of the report

The Board of Circular Economy Wales CIC  
for supporting this endeavour and recognising the symbiotic link between the circularity of resources and the circularity of wealth

To both Paolo Dini and Giuseppe Littera of the SARDEX  
for their time, support and detail on Mutual Credits and to Paolo Dini in particular for proofreading for technical accuracy

Dante Edme-Sanjurjo, Directeur General: Euskal Monet  
for his time and insights into possible social enterprise support through community currencies

Edgar Kampers, CEO: Qoin  
for his overview on currency design and European developments

Christian Galleri, Chiemgauer  
for his overview on Germany's largest Local Currency

Susana Belmont, REC (Real Economic Currency, Barcelona)  
for the detail and experience given regarding start up challenges

Robert Owen Community Banking  
for their suggestions before the study began that helped scope the study questions

Rolf Schroeder of the Alternative Currency Centre in Lyon  
for providing articles and insights

Claudio Gisler, Head of Product and Channel Management, WIR Bank  
for his time, insights and challenges for a long-standing Mutual Credit system

Malcolm Hayday, Former CEO of Charity Bank UK  
for joining the visit to the WIR Bank and for his considered questions and support

Mal Williams, Zero Waste International Trust  
for his encouragement, enthusiasm and support throughout

Paolo Dini of the Sardex Mutual Credit system in Sardinia, Gerrie Gallespie of City to Soil  
Australia, Mal Williams of Zero Waste International Trust and Malcolm Hayday former  
CEO of Charity Bank UK for their thoughts on the initial draft

Dr Jane Davidson for her considered views on the report



- **(ii) The international study was funded by:**

WINSTON  
CHURCHILL  
MEMORIAL  
TRUST



- **(iii) Consideration of synergies with the Circular Economy ambitions of Wales were funded by:**



Llywodraeth Cymru  
Welsh Government

### **Disclaimer re: funders:**

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The image displays a grid of logos for German regional banks and financial institutions. The logos are arranged in three rows and three columns. The first row contains 'sardex.net' (Circuito di Credito Commerciale), 'WIR' (Gemeinschaft. Mehrwert. Bank.), and 'GOIN' (money that matters). The second row contains 'CHIEMGAUER REGIOGELD' (für ein neues Miteinander), 'REC MONEDA CIUTADANA', and 'eusko'. The third row is empty.

## • (vi) Abbreviations and Glossary

**Alternative Currency** a synonym for currencies not issued by central banks (with the exception of the Scottish Bank which isn't a central bank) whether designed solely for profit (such as Bitcoin), backed or not backed, models that are designed to increase the liquidity of local businesses, and models that drive social and environmental behaviour change such as time credits.

**Complementary Currency** is an umbrella term for currency systems that work alongside and in harmony with national currencies. Complementary Currencies help SME's with liquidity and in gaining a foothold in local markets and loyalty towards local products. Both Mutual Credit and Local Currency (below) are forms of Complementary Currency.

**Currency** and **Credits** tend to get used interchangeably when referring to Mutual Credit Systems which is the focus of this report. For the purposes of clarity, this report, in the context of Mutual Credit systems, will use the term '**Credits**' and '**Currency**' when referring generically to the units of exchange of all alternative currencies.

**MCS: Mutual Credit System (or Mutual Credit Clearing System)** is a complementary system backed by goods and services

**LETS:** From the 1970's, best described as a peer-to-peer (P2P below) mutual credit between individuals.

**CLC: (Local Convertible Currency)** backed by national currency, often shortened to '**Local Currency**'

**CPR: Corporate Producer Responsibility**

**Social Currency:** backed by volunteer time or behaviour change with redeemable tokens given in exchange with the process often referred to as '**Tokenisation**'.

**B2B:** Business to Business transactions/services

**B2E:** Business to Employee

**B2C:** Business to Consumer

**P2P:** Peer to Peer

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## (vii) Author – Eifion Williams:

Eifion Williams is CEO of Circular Economy Wales C.I.C, a 2018 Churchill Fellow and former Business Advisor for Social Business Wales at the Wales Co-operative Centre.



Eifion helped in the design and roll out of the world's first Zero Waste village prior to Wales adopting its Towards Zero Waste strategy. For ten years Eifion was involved at the design stage of new social enterprises turning waste into wealth; models which continue to offer employment opportunities today.

Eifion is a former Chair of the board of Directors of Minera Community Ltd, an initiative that launched a community share offer to see a 13<sup>th</sup> century pub in North Wales re-open to the public.

Heading Circular Economy Wales, Eifion works with partners across Wales on the advancement of the 'Green Shed'©: hub, a communities facing provision where the people of Wales will be able to re-claim and re-create their own materials, making goods for their own needs. These hands-on and accessible pilot models, supported by Welsh Government, place Wales ahead of the game on its journey towards a Circular Economy and places it in the hands of its people.

Eifion is a passionate advocate of the symbiotic link between the circularity of resources and the circularity of wealth. The models recommended in this report provide a two pronged approach, not only enabling Wales to become the global standard bearer for the emerging Circular Economy; but an economy where communities, small enterprises and their employees are centre stage.

In 2018, Eifion was awarded a Churchill Fellowship; its motto being: 'Travel to learn, return to inspire'. To that end, he says:

**"It is my sincere hope that this report will inspire the collaboration of decision makers and practitioners to seize the huge opportunities laid out in this report. Wales's economy, SME's, employees and communities, facing the uncertainties of Brexit, now need the tools to shape their own resilience, regardless of what the future may bring"**  
- Eifion Williams

Eifion Williams, CEO Circular Economy Wales, March 2019.





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# Circular Wealth Wales

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A REPORT IN 3 PARTS:

1. MUTUAL CREDIT SYSTEM FOR WALES
2. DESIGN & START UP
3. THE EUROPEAN STUDY

## Forward by: Malcolm Hayday

### Founding Chief Executive, The Charity Bank Limited



#### At the sign of the Black Ox

Credit and debt play a central and oft times challenging role in a post-growth economy, by which I mean an economy that seeks to stabilise production and consumption for more wellbeing and sustainability. The challenge arises because the present credit system is seen widely as fuelling the unsustainable imperative of growth yet, access to credit has become essential for the survival of low-income households, communities and small to medium sized enterprises worldwide.

Banking and finance in Wales have become increasingly distant from the communities they seek to serve. It was not always so. In 1799, David Jones, a part time drover, farmer's son and saver of cattle dealers' money, founded the Bank of the Black Ox in Llandovery. It was one of the earliest banks established in Carmarthenshire and had more branches than any of its peers. "There was probably no bank of its era which enjoyed more local credit than the Black Ox Bank". Unlike many others, it did not fail but in 1909 was sold to Lloyds Bank. In 2017 Lloyds closed the bank's office at Prospect House. Similar fates faced other local banks swallowed up by the Clearing banks. 'Wales is too small to have a sustainable banking market' was an often-heard refrain. The first credit union was not established until 1980 and while they do have national coverage, they have not expanded in the way they have, say, in Ireland.

There has been a growing sense amongst the public at large that global banks are part of the problem, rather than the solution to an economic system where finance is part of, not master of, our society and where our wellbeing and sustainability are driving forces. Post-growth-friendly credit systems are coming back on the agenda of community economies. The kind of currency, the interest rate and the prospect for reciprocity between creditors and debtors all play a role in such a society.

Money-based credit has been practised throughout the last 5000 years but the modern credit economy with interest bearing and guarantee-based loans only emerged in the sixteenth century. Although there was much variation across regions, the use of credit became routine. Over time credit became not only indispensable to most people starting an enterprise but also essential to the very survival of households and communities in money-based economies.

As global banks withdraw their physical presence from communities, we need to ask ourselves: "What kind of credit arrangement is compatible with a sustainable and equitable economy?"

As the author writes in his introduction, mutual credit operates as a cashless or electronic bookkeeping transaction between small and medium sized enterprises when acquiring the goods and services they need operate. It does not replace the financial system but complements it. It never normally rises above 10% of SME turnover but at times of stress access to that extra 10% may be crucial to survival. It may also allow the enterprise to increase its activity without needing to access scarce and, possibly, expensive working capital finance.

The *Circular Wealth Wales Report* offers us a first compelling overview of a twenty-first century system of mutual credit. Drawing upon desk research and visits to six successful complementary currency models operating in mainland Europe, including the Sardex model practised in Sardinia and now in mainland Italian regions too, the author offers us 13 benefits of a mutual credit system and reasons why this can meet the challenges Wales faces in a post-growth world. He invites the Welsh Government to engage through the commitment of resourcing and creation of a taskforce to take the proposal forward.

**“A Welsh Mutual Credit system could be more successful than the Swiss WIR Bank”,**  
*Claudio Gisler, WIR Bank.*

There will be many challenges ahead. The development of the idea into a fully-fledged system will take time that politicians do not generally have. It will require investment in education and confidence building in a new way of financing activity but

**“ Parallel currencies, when used with an electronic bookkeeping system (blockchain), can reach enormous levels of efficiency, creating much less waste and increasing sustainability”** *Jem Bendell, Cumbria University.*

Malcolm Hayday, CBE

Senior Fellow, Finance Innovation Lab

And Founding Chief Executive, The Charity Bank Limited

## • 1. Executive Summary:

If Wales had initiated a copy of Sardinia's Mutual Credit system (MCS) - the SARDEX, in 2008, and it had followed the same growth trajectory since then, Welsh SME's would now be strengthened to the tune of **£256 million in additional turnover** (Sec.1.3.xii) and by a further **£190 million saved** resulting from using a SARDEX styled cashless Business to Business (B2B) transactions system (Sec. 3.8).

**Greater liquidity** (Sec.1.3.i) amongst our SME's and start-ups, will help **save thousands of jobs** (1.3.ii) when the economy faces pressure. That was certainly the experience in Sardinia following the downturn when the Sardex was initiated. It is widely recognised as saving the day for many SME's which are 99.5% of the businesses in Sardinia and Wales. (SME's employ <250 employees)

The MCS membership criteria suggested in this report, as a requirement, include a commitment to taking steps in **transitioning towards the Circular Economy** (Sec.1.3.vi), enabling the Welsh economy to tap into the £2billion per annum of the potential savings that are cited by the Welsh Circular Economy report carried out by the Ellen McArthur Foundation in 2011.<sup>1</sup>

Provision of a Welsh Mutual Credit system, as evidenced throughout Part 1 of this report, provides Wales with the framework to:

- Roll out reward schemes to **advance Wales beyond its current global recycling position, third**, and to reach Zero Waste at an accelerated pace and before its 2050 target.(Sec.1.3.v and 1.3.xiii)
- Fund the re-launch of a **sustainably-funded 'Environment Wales'** from future profits combined with a mandatory percentage consumer donation from a Business to Consumer card (Sec.1.3.xi)
- **Stimulate growth in local supply chains** in all corners of Wales (Sec.1.3.iii)
- Energise our **tourism, arts and leisure** sectors (1.3.ix)
- Generate long term sustainable **financial support for Welsh Social Enterprise** (Sec.1.3.xi and 1.3.iv)

For a calculated **£150,000 a year for staffing** (excluding other operational costs), a Welsh Mutual Credit system will build its staffing numbers to around 30 people based on a 2% transaction charge and be self-sustaining from around year eight onwards – copying the SARDEX.(Sec.3.9).



*There are 13 benefits cited in Section 1 that align with Wales's needs. See Sec. 1.4 to examine how these benefits align closely with key proposals in Mark Drakeford's Leadership Manifesto, the numerous goals within The Wellbeing of Future Generations Act, sections of the Environment Act (Wales), Towards Zero Waste and the strengthening of the Foundational Economy.*

This report is in three parts. Part 3 was the first to be written after travelling through Europe to interview users and managers of the most successful 'Complementary Currency' systems operating in Europe in order to write a paper for a Churchill Fellowship. That paper describes and evaluates the various systems; essentially, the journey that led to the recommendation that a Mutual Credit system would be the best fit for Wales's distinct needs.

Part 1 of the report looks at the specific Mutual Credit recommendation in depth. It is **a guide for decision makers to consider all of the benefits cited** (Sec.1.3), to **debunk the myths** (Sec.2.1) and consider the **projected figures for Wales** (Sec.1.3.xii, 3.8 and 3.9) and assess **alignment of the benefits of Welsh and UN legislation** as well as key policy commitments (Sec.1.4).

Part 2 is **a set up tool kit**, the initial terms of reference for a CEW and the Welsh Mutual Credit taskforce to consider.

The Sardex, now in it's ninth year, has operated successfully in Sardinia. The 11 replications on the Italian mainland, all successful, have excited economic commentators across the global media. CEWCIC has established a formal relationship with the principal movers of the Sardex, Paolo Dini and Giuseppe Littera, whilst working on this report. They now see Wales as the location with the highest potential for the first SARDEX replication outside the Italian area. **We would like to invite The Welsh Government to help and be a part of that journey.**

Beyond electronic transaction licences and paying tax on transactions, the cashless nature of Sardex allows the initiative to operate outside of banking regulation. This is an important factor and is the main reason for keeping the Mutual Credit system and Community Banking scheme completely separate (Sec.5.4).

Lessons from the Swiss WIR Mutual Credit system are clear in this regard. The WIR grew each year, in terms of transactions and membership, from the mid 1930's up to the point in the mid 90's that they added traditional banking services to their business offer. Within what then became the 'WIR Bank' the Mutual Credit part of the operation has been shrinking ever since that date (Sec.6.3) with staff skills having to be aligned with the regulatory banking requirements adopted. They now recognise their error.

Like the Barcelona 'REC' currency hosted by the NOVACT organisation (6.5.ii), **Circular Economy Wales CIC will steer, launch and host the Welsh Mutual Credit system** until (a) the principles of mutuality, social equity, circular economy and triple bottom line accounting are engrained into its practices and (b) a special purpose vehicle can be constructed to protect these principles. Whilst the Welsh Mutual Credit would aim to work with Wales's new Community Bank to offer joint finance and Mutual Credit packages similar to the Sardex and Banca Etica in Italy: the Mutual Credit for Wales needs to **develop independently from banking regulation** and emulate the phenomenal success of the Sardex.

**Wales's economy, SME's, employees and communities, facing the uncertainties of Brexit, now need the tools to shape their own resilience, regardless of what the future may bring"** - Eifion Williams (Report Author)

- ⇒ Summary of strategic benefits for the Welsh Government: **Section 3.10**
- ⇒ Alignment of the cited benefits with key Welsh Legislation, UN SDG's and Mark Drakeford's Leadership Manifesto proposals: **Section 1.4**
- ⇒ Key economic projections: **Sections 1.3.xii and 3.8**
- ⇒ Next Steps and Recommendations: **Section 7.0**

## Introduction:

Mutual Credit operates as a cashless transaction between SME's when acquiring the goods and services they need to operate. This activity, which never usually rises above 10% of an SME's total transactions, because it represents a value of spare capacity, helps maintain conventional currency cashflow, hence being referred to as a 'Complementary Currency' as opposed to a separate 'Alternative Currency'.



Thomas H Greco<sup>2</sup>, a US author who writes about Mutual Credit systems, uses a boat harbour wall as an analogy when making the case for one. We all understand that local fishing businesses' assets are protected behind the breakwater of a harbour wall. We know that local fishermen's income is derived from those boats, which are protected from the ocean storms behind that wall but at the same time are still connected to the global economy – the open sea. The storm will come and decimate the boats without that wall, of that there is no doubt. Mutual Credit, a complementary currency, works alongside SMEs' sterling accounts, helping them go further and bringing stability to businesses across the area where the Mutual Credit operates (Sec.3.0)

As a proportion of turnover, Mutual Credit Systems visited typically account for a maximum of 10% of SME member transactions. This isn't an 'alternative' that replaces a monetary system; it's an effective 'complementary' business tool that could be offered in Wales. Being cashless, Mutual Credit, existing as electronic numbers in a programme, doesn't fall under banking regulations.

It is worth noting that the 5-year Welsh survival rate for enterprises established in 2012 and still active in 2017 was 44% (Stats Wales 2018). A Mutual Credit system can help Welsh Government improve and provide a cutting edge tool to increase business survival rates. The creative energy of Wales's entrepreneurs can be better sustained and fully optimised. 20.1% of 16-65 year olds in Wales were economically inactive in 2018 (Stats Wales) and over the last few years we've trailed behind the UK average. The proposals within this report would drive up employment opportunity in Wales.

With Mutual Credit being interest free, member businesses in Wales would have access to interest free credit meaning less recourse to working capital loans. A Welsh Mutual Credit membership would target SMEs. Micro, small and medium-sized enterprises account for £46billion turnover or 40% of Wales's private sector turnover. They total 257,525 enterprises currently, representing 99.4% of the businesses in Wales.

In terms of protecting jobs, a Welsh Mutual Credit's Business to Employer provision (4.2.ii) would provide a tool to help safeguard the jobs of 719,600 employees totalling 51% of the Welsh workforce (Stats Wales 2018) and even add jobs as business turnover improved.

If Wales follows Sardinia, any members of a Welsh Mutual Credit system will benefit from an average increase of 5-10% additional turnover (the average is currently 7% in Sardinia). This is the increase reported among other Mutual Credit systems. In addition, there is increased liquidity resulting from cashless transactions.

<sup>2</sup> Thomas Greco, The Beginning of Civilisation, Floris Books 2010

This Report makes a clear business case for SMEs to join a Welsh Mutual Credit system. This report also recommends a membership requirement that will enable Wales to become the global standard bearer for the material Circular Economy.

Businesses will be attracted to a membership of the Mutual Credit system because they will see that they will get long-term gains by doing so. They will find safe harbour in times of economic storms.

With access to the numerous benefits identified in this report, businesses could sign up to agree to annual incremental steps to help Wales become a Circular Economy (Sec.1.3.vii),

- Adopting a Circular Economy Statement and making a plan.
- Implementing a Circular Economy plan
- Engaging in a year on year transition to Circular Economy business systems

A Mutual Credit system will enable Wales to become the Circular Economy exemplar the Welsh Government desires, with circularity of both resources and wealth. Circular Economy Wales CIC recommends that Wales plans for a Mutual Credit system that drives the intended Circular Economy. The benefits will tackle the short supply of resources and shortage of liquidity within one framework.

The following report proposes a Mutual Credits (B2C) provision that will facilitate credit distribution to householders engaging with kerbside Food Caddie schemes (sec 2.5.ii), saving Welsh local authorities between £4.4m to £14.8m a year across Wales and contributing between 3% - 10% to the Welsh recycling figures. Not only would this move Wales to the gold medal recycling position in the World, but it will keep us there for a number of years to come.

Following set up, a later stage 'Business to Consumer' card will channel donations from card users to an all-Wales Social Enterprise support scheme with strong environmental goals (Sec.4.2.iii)

It is recommended that subject to the necessary risk assessment protocols, Wales's proposed Community Bank may consider matching these 'credits', providing a scheme that allows social enterprises and SME's to think seriously about new growth and innovation.

Buy Local campaigns or Local Multiplier monitoring will not be needed, a Welsh Mutual Credit system deals with it all as the credits could only be circulated amongst Welsh member businesses.

Finally, and importantly, this report offers an active partnership with the Sardex, perhaps the most successful of all the systems visited where language and heritage was included centrally in the operation. It commends itself to the Welsh circumstance admirably and it will be exciting to be part of this partnership in action.





# PART 1 of 3:



## A **Mutual Credit System** for Wales

Signed by the board of Circular Economy Wales CIC, April 2019:

Jenny Simms—CEO of Pembrokeshire FRAME

Malcolm Hayday CBE —Founder CEO of Charity Bank UK

Jay Martin—CEO of Crest Cooperative

Ellen Perryman—CEO of Greenstream Flooring

Claire Savage—Joint Owner of PR Accord

John Bennett—Former CEO of Pack-IT

Eifion Williams— CEO of Circular Economy Wales

## • 1.1 International Developments:

The world of finance is changing and Wales could play a leading role in helping shape more sustainable means of running our economy. Social impact bonds, Corporate Producer Responsibility (CPR) and social procurement are all on the rise globally. The world of finance is rapidly changing, and complementary currencies are being embraced and utilised successfully, especially in the SME sector, with many newer exemplars in America, Australia, Italy, Spain the Netherlands and Germany. The WIR Bank in Switzerland, a Mutual Credit system of cashless transactions between businesses, operating since the 1930's, are no longer lone operators.

Claudio Gisler at the WIR <sup>1</sup>, the world's first commercial mutual credit system established in 1933, welcomes the international growth for the sector:

**“WIR is no longer alone, complementary currency is now a growing sector that can share best practices and alliances. We're welcoming the fresh ideas”.**

This Autumn there have been representations to the WIR Bank in Basel from Wales, as part of this report, and also from Sweden, both looking at creating a Business to Businesses (B2B) Mutual Credit System. Alongside the author of this report, representatives from the West Midlands 'Credex' <sup>2</sup> start up (launching summer 2019) attended the Sardex <sup>2</sup> autumn 2018 'Mitzas' conference in Cagliari, Sardinia.

In the Forbes financial magazine <sup>3</sup>, December 2018; Maria Rita Corda writes :

**“Sardex has conquered not only the island of the nuraghi and the crystalline seas, but also another 11 Italian regions and, moreover, the whole world observes it with great attention”.**

There has been significant interest in Sardex in the world press with the New York Times, Financial Times, and the Guardian carrying articles as well as lots of TV and radio media.

The commercial business to business (B2B) side of the complementary currency sector is growing and developing greater standards of practice, sophistication and impact.

IRTA <sup>4</sup>, the International Reciprocal Trade Association , has been witnessing the growth of complementary systems rise steadily over the last 5 years. In this report we focus on systems that have operated for ten years or more in European regions and which continue to grow.



Ref: <sup>1</sup> [www.wir.ch/](http://www.wir.ch/) <sup>2</sup> <https://credex.network/>

<sup>3</sup> <https://forbes.it/2018/12/11/sardex-sardegna-moneta-virtuale-fintech/> <sup>4</sup> [www.irta.com/](http://www.irta.com/)

In the last 12 months the United Nations Conference on Trade and Development (UNCTAD) and the United Nations itself have spotted the opportunities of this growing sector. The first intergovernmental session <sup>5</sup> on complementary currencies was held in Geneva, in October 2018, in the Human Rights conference room. The session, attended by Circular Economy Wales, looked at the potential of combining emerging complementary currencies with blockchain technology (Sec. 4.8) the UN's Sustainable Development Goals (Sec1.4)



The Blockchain Commission for Sustainable Development <sup>6</sup> was established in September 2017 (by the Global Partnerships Forum, the PVBLIC Foundation (a media organisation, and The Fund for Philanthropy). The launch was in response to the need to develop a framework by which the United Nations and its agencies, member states, intergovernmental organisations, NGOs, financial institutions and private sector-led organisations can come together to develop and adapt blockchain technology to fulfil the UN's Sustainable Development Goals (SDG's).



**The Welsh Mutual Credit system would benefit from joining the International Reciprocal Trade Association (IRTA) to bring the best of global best practice to Wales.**

## • 1.2 Wales - Ready for Mutual Credit:

A Mutual Credit would serve Wales well and its introduction would be timely and appropriate. The Centre for Cities report <sup>7</sup> (2018) points to Wales's three Cities be amongst the biggest losers from a bad Brexit deal for the finance industry. The Institute for Public Policy Research <sup>8</sup> (2018) suggests Wales and the North East of England could be hit hardest by Brexit whilst the Demos thinktank <sup>9</sup> suggests (2017) that Wales will be hit harder than any other UK nation or English region, if or when the UK leaves Europe, Leaving the EU is likely to mean leaving the single market and the customs union, leaving Welsh companies facing tariffs from the EU on goods exported. Nearly two-thirds of Welsh exports go to the EU, Demos said, followed by the north east, Yorkshire and Humber and Northern Ireland. The report stated:

**"Overall Wales has the highest proportion of exports going to the EU, and therefore [is] most affected by a potential loss of trade agreements,"**

If Wales does not have full and unfettered access to EU markets, Welsh SMEs and Social Enterprises will need additional business tools to safeguard their liquidity. The average 5-10% additional turnover that a Mutual Credit generates <sup>9</sup> will be an incredibly useful tool in such circumstances with Brexit looming.

With the economic challenges Wales will be facing in the coming months and years, we have an opportunity to move up a gear and quickly establish and offer a new financial tool to help our SMEs and communities. 'Social Currency', i.e. behaviour change tokenisation models (6.1) are already underway in Wales. A commercial 'complementary currency' system is needed if we are to have a real positive impact on the Welsh economy North and South.

One of the notable developments in advancing behaviour change models through tokenisation, where Wales played a part, was the EU funded Community Currencies in Action programme (2011-2015) <sup>10</sup>. It attempted to lay the ground for cross-sectorial currency innovations designed for the common good. The models provided a package of support structures to help in the co-design of six pilots in North West Europe. None of these were a Mutual Credit System, advocated in this report. Of the six, three survive. We explore why the pilots may have had a 50% failure rate (6.1, 6.2) and why, throughout this first section, the Mutual Credit system in Sardinia with eleven replications on mainland Italy have all prevailed.

The legacy of the programme in Wales of course was the setup of SPICE (now Tempo). Therefore their distinct model of using tokens for behavioural change and/or volunteering, referred to as 'Social Currency' and 'Time Banking' retrospectively, isn't being replicated in this report. A Mutual Credit System is quite different as it is designed to have an impact upon SME liquidity and protect jobs, combined with a wider potential geographic spread reaching into a network of supply chains whose boundaries stretch out further than loyalty to one town or city. This report however advocates collaboration between initiatives that share the same values and goals, that of strengthening Welsh communities and striving towards Wales's sustainability goals.

If Wales is to become the first Sardex replication outside of the Italian area, an idea currently being discussed by Sardex with Circular Economy Wales CIC, we should consider the parallels if we're looking for a similar context within which a Sardex model could succeed.

- Like Wales - Sardinia is a smaller economy to the West of the bigger economy that it is attached to.
- Like Wales - Its economy consists of tourism, agriculture and heavy industries that are a fraction of their size compared to 20-30 years ago.
- Like Wales - When there is an economic downturn, as a peripheral economy, Sardinia historically loses businesses and jobs faster and deeper than in the mainland economy.
- Like Wales - Sardinia is bilingual

- Like Wales – Sardinia has a language and culture that pre-dates Rome, with Beaker folk being traced back to burials found on the island

So – for anyone with a sense of Welsh history – the parallels and similarities are striking. In this context, the success of the Sardex model in Sardinia should be of interest and the current partnerships through Circular Economy Wales should be developed and formalised. The historical context aside, 1.3 explores the future opportunities that a Mutual Credit system will bring to Wales, all providing distinct solutions to the legislative challenges set out by the Welsh Government.

Wales, like Sardinia, has a strong tradition of deriving solutions from mutual and cooperative endeavour. As with the pre-start period of Sardinia's Sardex system, informal discussions with Social Economy leaders in Wales have been received enthusiastically. From Robert Owen's Cooperative models to the current Welsh 'Recycling Blueprint', many of the most innovative changes in Wales have arisen and been designed within Wales's Social Economy, initial set up. The initial challenge for a Mutual Credit start up, is the recruitment of the first couple of hundred members. This report recommends that initial membership recruitment for Wales's new Mutual Credit System begins with Social Enterprises but builds a multi-sector membership quickly with supply chains covering all sectors.

When goods aren't available for intertrade on the island, Sardex members can intertrade with the eleven other circuits on the Italian Mainland. Will members of a Welsh Mutual Credit be denied this opportunity of intertrade with a neighbouring circuit? This Autumn, at the Sardex conference in Cagliari a delegation attended from the West Midlands who intend to launch the 'Credex' in the Summer (2019). Wales therefore finds itself in a unique position, in Mutual Credit terms, of being able to explore potential cooperation with a neighbouring circuit.

Trading with neighbouring Mutual Credit systems can offer more choice for SMEs. Thomas Greco, one of the worlds published authorities on Mutual Credit, suggests:

**"The capacity for cross trading will add tremendous value to the exchange membership".**

In this scenario, if one product or service within a supply chain simply has to be sourced outside Wales, the sterling money saved by using credits still remains in Wales and vice-versa with, for example, an SME from an English region.

Switzerland, where the WIR Mutual Credit system has been in operation since the 1930's also has a huge banking sector where money is usually in supply. The need and potential success of a Mutual Credit system in Wales, as in Sardinia, could be greater.

**"A Welsh Mutual Credit system could be more successful than the Swiss WIR Bank"** - Claudio Gisler, WIR Bank

Our success could go further. The big opportunity for Wales, in the context of the material Circular Economy, was the 2011 Ellen McArthur Foundation report for Wales <sup>11</sup>. Circular Economy Wales believes that the material and financial Circular Economies are symbiotically linked and that focusing upon both in tandem within one system will drive Wales towards its Sustainable Development goals far more rapidly.

This report advocates combining the Mutual Credit model with a membership criteria that demands incremental steps towards Circular Economy business practices year on year (Sec. 1.3.v). This would provide a currency design helping to unlock the £2bn per annum sighted in the Ellen McArthur report, if Wales moved to a circular economy in all sectors.

### 1.3: The Benefits of a Mutual Credit System for Wales:

The thirteen benefits of a Mutual Credit system, set out in the following sub-sections, will be a game changer for the whole of Wales and its people. They have been carefully selected and matched to solve specific challenges Wales currently faces.

Thomas Greco, in his book on Mutual Credit <sup>12</sup>, warns against overloading credit systems with too many tools to tackle social inequalities. Greco suggests that an overburdened design becomes difficult to market to new members. However, social and environmental benefits nonetheless can and do exist within some Europe's most successful complementary currencies (a) by default of the design (b) through creative partnerships delivered by others or by (c) ensuring there's an alluring business case that can't be refused.

For example, the Eusko and Sardex take different positions on the issue of driving triple bottom line sustainability from the currency system outwards to the societies they serve and the environments they operate within.



Rather than a single mandatory membership requirement that might be resisted, the Eusko provides a choice through a selection of three commitments. Members choose one of the following 'challenges':

**A commitment to renewable energy,**

explored further in section 1.3.iv and 4.6

**A commitment to bilingual signage**

(French and Basque), explored in section 1.3.x

**A commitment to Zero Waste**

Specific recommendations developed further in section 1.3.v, 1.3.vi

The system allows the member to take ownership of their 'challenge'. The success of this approach is underpinned by the Eusko working with delivery partners:

e.g. help in achieving Zero Waste is facilitated via public sector collection services.

Translation of signs, menus etc is provided by the Basque Language Centre in Bayonne, with the member only having to pay for the translation (Sec.1.3.x). Help for the renewable energy option is provided in the form of a Eusko/Euro loan hybrid (Sec.1.3.iv), where the Eusko part of the loan is interest free (common amongst other systems visited). Each of the three areas covering sustainability of culture, of energy and of material resources has a long-term net benefit for the businesses who join the Eusko. With membership figures growing each year, they seem to have got the balance right with their approach: balancing sustainability goals with recruitment and retention of members.



**Note: for Welsh and UN legislative alignment with each of the benefits presented in the following pages, please refer to Sec.1.4**

Sardex (Part 2) avoids placing behavioural conditions as an entry requirement to joining. Nonetheless Sardex achieves several sustainable development goals, as suggested above, as an inherent part of the design spread out through its separate but integrated Business to Business (4.2.i), Business to Employer (4.2.ii), and Business to Consumer schemes (4.2.iii). It can also easily integrate renewable energy generation as another form of backing for the credits issued by owners of solar panels, wind turbines, etc. The challenge, rather, is to overcome the regulatory hurdles (2.2.ii, 5.4) still lobbied for by the main Italian utility.

In the rest of this section the report notes some of the clearer benefits of alternative currency systems, observed during visits to currency systems across Europe. For the purposes of designing and proposing a Welsh Mutual Credit that isn't overburdened, as Greco suggests we should avoid, the benefit examples are categorised as follows:

- **Inherent benefit within the currency design**
- **Schemes that we may wish to 'add' but where there's a clear business benefit to the member**

This exercise will demonstrate the maximum benefit of a Mutual Credit system whilst staying inside the parameters laid down by Greco. This paves the way for one carefully considered membership requirement: to sign up to an agreed Circular Economy plan (i.3.vi) that will be delivered within a three-year period, the organisation will work with its members on four incremental steps – a stairway to the Circular Economy:

**Increment 1. The signing up to a clear Circular Economy statement**

**Increment 2. The creation and adoption of a Circular Economy policy and implementation plan**

**Increment 3. Receive assistance to transcend to circular economy practices and report on achievement.**

**Increment 4. Receive assistance to account and report on progress into the future.**

A Circular Economy mark will be provided to all Welsh businesses adopting a policy and plan. *(For economic growth and impact **graphs** of actual credit trading under Sardex see Sec 4.2.iv and 4.2.v)*

### • **1.3.i Easing Cashflow Challenges for Welsh SME's**

The option of cashless transaction between Sardex member businesses on Sardex accounts for 10% of their day to day transactions (Paolo Dini 2016). 10% remaining in SME accounts is a game changer, one that keeps community businesses open and jobs sustained.

In Forbes magazine (January 2019); Maria Rita Corda writes <sup>13</sup> :

**"Sardex has mitigated the effects of the credit crises on small and medium-sized businesses in Sardinia".**

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How? Let's say that I'm a cheese producer in Carmarthenshire and you're a micro-brewery in Swansea. I need beer for my visitor café, and you need cheese for an event that you are putting on. The exchange, fulfilling each other's business operational needs, leaves both our sterling accounts unscathed.

**By being members of a Welsh Mutual Credit system we've both increased our liquidity and our businesses are mutually and demonstrably stronger.**

For small companies with liquidity challenges and low reserves, this gives a fresh dose of energy. Mutual Credit systems, such as the Sardex and WIR (Sec.6.3) have been extremely effective. These new instruments would serve Welsh SMEs and Social Enterprises very well in this age of austerity and sudden economic downturns, not to mention the uncertainties surrounding the consequences of Brexit,

Sardex <sup>14</sup> is a shining example of success which could easily be replicated in Wales. 2016 (Italian Calendar tax year) saw transactions of €33 million of goods and services being exchanged within the Sardex Mutual Credit System (B2B and B2E). In 2017 it rose to €40 million and in 2018 to €43 million or €44 million if you factor in the new B2C service set up at the end of the year. Put another way, that's €44 million of additional working capital staying within Sardinian SMEs. (Sec.2.1.iii). Increasing liquidity, bringing stability to SMEs (which accounts for 95%+ of the private sector in both Sardinia and Wales). Increasing job security and providing growth opportunity is within Wales's grasp.

Notes:

2018 saw a Business to Consumer service, Bisoo Sardex (Sec.4.2.iii), being set up which turned over €1million in a few months and which is growing fast. So for 2019 a significant increase is expected.

These figures do not include the other 11 circuits on the Italian mainland but they do include trade between Sardex and these other circuits.

All these figures have been calculated by Sardex using the GDP method as opposed to the clearing house method (see footnote) that would double the figure. Both legitimate means of accounting Mutual Credit.

### • 1.3.ii Safeguarding Welsh Jobs

Mutual Credit helps sustain jobs. A quick google search on the reasons for business failure will place cashflow challenges in the top three. Failing businesses often boast good profits being made during an annual cycle but don't always have the right amount at a specific moment in time to keep going. Cashless Mutual Credit trading provides an additional choice to make money go further at any time it's used. The other side of access to zero-interest credit for SMEs with cashflow problems is an increase of 5-10% in turnover reported by Sardex SME members during our interviews (November 2018). Some of this is due to an increase in client numbers due to the preferential spending within the circuit, and some to the spilling over into the retail sector of company owners with greater spending power.

Ref: <sup>14</sup> <https://www.sardex.net/?lang=en> Note: There are two ways to count mutual credit turnover 1. Clearing House numbers and 2. GDP numbers. A clearing house counts each transaction twice, so clearing house volume is twice as large as GDP method.



Within tight margins, 5-10% reduced dependency on available money through cashless trading makes a huge difference in make or break scenarios, something that was noted by Sardex and their members at the beginning of the latest economic downturn. When the economy is not in a crisis, this additional working capital frees up the same amount of Euros that can be used for investment.

Paolo Dini from Sardex estimated that around 10% of the membership had used the Business to Employee (B2E) programme to help maintain employment. As €Euro reserves in Sardinian businesses were running dry, member businesses gave employees the option of a percentage cut in €Euro wage that was compensated by Sardex credits that could be spent in the circuit. All that needed to happen was a slight change in buying habits, when using the Sardex portion of the wage. The net result were people keeping their jobs. There are currently 3200 registered business members across Sardinia with 3,000 individuals who work within those firms who have their own Sardex accounts under the B2E programme, many of whom would have lost their jobs during the crisis.

### • 1.3.iii Stimulating Local Supply Chains in Wales

Near the Eusko headquarters in Bayonne, there's a shop that rents and sells computers. Dante Edme-Sanjurjo, Directeur General of the Eusko, explained:

**"The computers there are marginally more expensive than ones you can buy from the internet. However, if anything goes wrong, the shop can offer support and provide it quickly".**

Eusko <sup>15</sup> membership immediately positions the business as one that is accessible and accountable to other businesses; far more likely to be there if needed. Local businesses will buy computers locally and get quick local service. Eusko members, like those in other types of complementary currency, get to know each other through the system and benefit from a brand where local accountability is guaranteed. Apart from providing another tool to utilise local markets effectively, these currency systems help redirect the supply chain loop to run through local businesses every time (Fig.1 & 2 opposite). Part of the work coordinating a complementary currency system is for the centre of operation to identify business member gaps in the supply chain loops and then target and recruit accordingly.

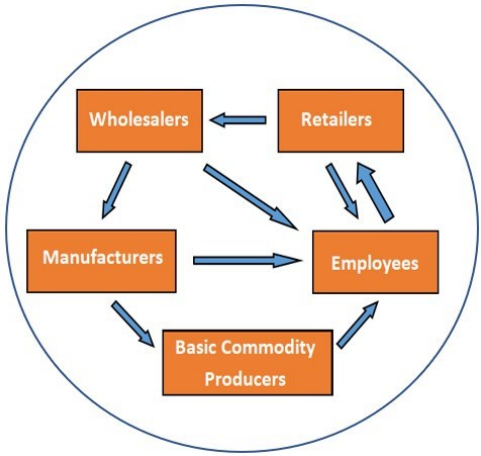
Closing the loop will have radical benefits beyond cold business economics. At the first intergovernmental session at the UN on complementary currencies (October 2018) in Geneva, greater gender equality was cited as one of the knock-on benefits of localising supply chains through systems large enough to have impact across a region. During the early years of child raising there is undoubtedly greater opportunity for men in the employment market to travel away from their communities to earn; more scope to seek a skill's fit and more choice in terms of competitive wages. The closer that wealth circulation and retention is to communities, the greater its gender equality.

An economically stable SME sector in Wales provides greater choices in terms of careers here in Wales's communities.

G. Dobrauz, from PWC Legal <sup>16</sup>Switzerland said at the UN in November 2018:

**“The introduction of robots won’t be the biggest change to society through AI: the biggest shift will be women being central to our new economic systems through blockchain based complementary currency” (Section 4.8 blockchain impact on currency and supply chains)**

Fig.1 is based on Thomas H. Greco’s analysis of Mutual Credit in a supply chain and the need to recruit all sections of business into the membership



**Graph of Credits Sent (2017)**

~~ Volume, %Vol; N Users, %Users; N Tx, %Tx ~~ 36 Thickest Arrows ~~

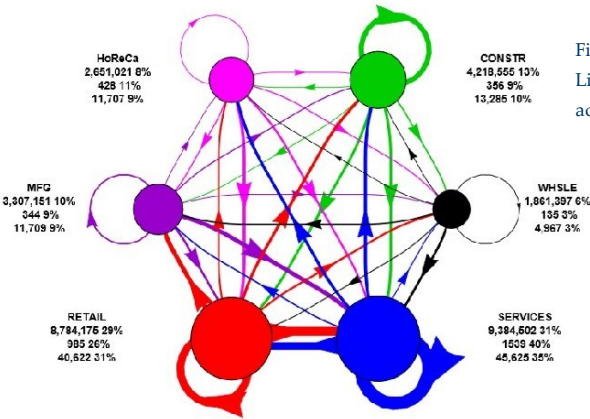


Fig.2 (Courtesy of Dini and Littera, Sardex, showing actual flow of credits in 2017)

Ref: <sup>16</sup> <https://www.pwc.com/gx/en/contacts/g/guenther-dobrauz.html>

<sup>17</sup> The Beginning of Civilisation – Thomas Greco, Floris Books 2010

### • 1.3.iv Credit for Welsh SME Investment

Rather than borrowing money from high street banks, members of Mutual Credit systems have a second option that is interest free. A mutual credit line, usually limited to around 10% of turnover, is radically different from traditional 'money' credit. The traditional route to making capital investment requires borrowing bank notes to make the purchases and promising to pay them back, with interest, based on future profits. Mutual Credit, once given, is a promise to its members to put future goods or services of the same value back into the circuit.

A café owner close to the Sardex headquarters in Serramanna, Sardinia, didn't have enough credit to get an air conditioner last summer. The credit limit that Sardex had set based on its vetting enabled him to buy one. It was a vital piece of equipment to a Mediterranean café and this level of bespoke business support was crucial for the business so they could avoid interest payments through traditional loans and use Sardex instead to acquire the goods they needed. To settle his Sardex balance, the business owner needs to accept Sardex credit from customers within a year via the B2B or B2E schemes. By the autumn, during the research for this report, the café owner had traded enough goods in cashless transaction for his Sardex account to be neutral again. With Sardex he has two lines of credit available, Euros via his bank and tradeable credits via Sardex. Avoiding needless expense via his bank he referred to the net result in unequivocal terms, **"It's less stressful when I'm able to pay rent for our premises. That's what Sardex membership has provided me"**.

Sardex and all of its replicated circuits have experience of partnering with Banca Etica, a small bank with very reasonable terms, teaming up to offer long-term investment and growth packages combining national currency with local credits. Greco refers to Mutual Credit systems offering short term investment based on 'turnover credit' i.e. credit limits based on the capacity to pay back from existing monthly turnover within a relatively short time frame as opposed to longer term 'investment credit'. In Sardex the payback period is set at 12 months rather than 1 month. After 12 months pressure is put on the member who has not recovered their debt yet. The contract states that debt which has not been recovered after 12 months will need to be repaid in Euros to Sardex S.p.A. in order to cover its cost of managing it on behalf of the circuit (i.e. buying goods with those Euros to be resold for credits in the circuit, thereby filling in the hole again).

This procedure is cumbersome and is applied very seldom, usually only for bankruptcy cases. In all other cases repeated calls are usually sufficient to resolve the problem. In the Sardex, the proportion of the analogue of non-performing loans is less than 10%. Because in Sardex the ratio of backing to debt is 5 to 1 on average, this level of NPL (Non Performing Loan) is not a threat to the system and can be managed over time. The Amount of products and services a member commits to selling for credits is roughly 10% of its turnover. The credit line set by Sardex S.p.A. is roughly 2% of its turnover. That gives a backing-to-debt ratio of 5:1, which is the opposite of a speculation bubble.

The new blockchain-based platform (4.8) Sardex is developing will automate the monitoring of each member's debt position and will simplify the management of these situations through automatic alerts and, where needed, sanctions and fees set at the protocol level. The new system will also include some level of participatory governance by the members, motivated by the shared goal of circuit stability.


Interestingly, the Sardex partnership with Banca Etica allows for the provision of an innovative 50/50 Sardex Credit and Euro Loan. Without setting a condition to procure at least 50% of the investment through local supply chains, the outcome is guaranteed by design. Similar hybrid loans in other European systems are typically used by currency members to invest in their own renewable energy infrastructure, saving them money over the long term.

The REC (Real Economic Currency 1.3.viii) <sup>18</sup> that launched in October 2018 in Barcelona provides interest free Euro loans for their members to invest in renewable energy assets; which they will gain from financially in the long term too.

The loan can only be paid off to the REC in RECs. This is a slightly different model where a loan of national currency money is paid off in earned local currency, at a rate of 1:1, essentially 'backing' the currency and making it transferable in effect.

The Bavarian Chiemgauer <sup>19</sup> run a micro loan scheme along these lines, repayable in one to four years.

A partnership such as this in Wales, with its own Community Bank now under development, would allow 50% of the loan, via the Mutual Credit, to be both local and interest free.

 This report favours cashless transactions. If cashless credits are to be offered, matching a Pound Sterling loan in partnership with the Welsh Community bank, then a ratio would have to be set taking into consideration the availability within a Welsh Mutual Credit membership of all the necessary services and specific equipment needed for a small business to be able to purchase via mutual credit. The Mutual Credit aspect of a hybrid loan offer could increase as the circuit grows.

**RECOMMENDATION: That an appropriate and effective Mutual Credit/Pound Sterling growth finance package in partnership with the new Community Bank for Wales be considered by the Welsh Mutual Credit.**

Such a partnership will need to avoid a situation that the Swiss WIR Mutual Credit <sup>20</sup> found itself in about ten years ago where bank partners insisted that the recuperation of a default loan should pay off the Swiss Franc element before settlement of the WIR credit being considered. A Welsh Community Bank and a Welsh Mutual Credit, both as fledgling organisations, will be able to design a sustainable model agreeable to both parties.

- **1.3.v Reducing Waste & Advancing the Circular Economy**

## **- Reduction of Material Waste Within the Welsh Supply Chain:**

Mutual Credit systems provide opportunity to acquire appropriate levels of stocks from local producers in smaller supply chains where smaller sales are viable. Local supply chains, encouraged by Mutual Credit, helps reduce transportation costs and carbon emissions.

Susana Belmont, of the REC (Real Economic Currency) pilot in Barcelona reports that **“only Circular Businesses are being allowed to join the scheme”**; i.e. committing to recycling and spending locally along the lines of Circular Economy Wales’s circular resource and circular wealth approach.

She suggests that:

**“through a Local Currency you can encourage proximity consumption; a key stage on the journey towards sustainability. The ability to encourage less wasteful local supply chains is inherent within a Local Currency or Mutual Credit System”** – Susana Belmont

Galia Benaratzi, Co-Founder of Bancor <sup>21</sup> (a global platform for buying new currencies), spoke at the UNCTAD session on alternative currency at the UN in Geneva (November 2018)

***“Current Supply chains are energy intensive systems. We can move to a less energy intensive way driven by local currencies. Local people use their resources better”*** - Galia Benaratzi

Within local supply chains there is greater scope for businesses to ensure that the right number or quantity of goods is delivered at cost; be that food, clothes and other goods or services. **Only 25% of clothes sells at original price** <sup>22</sup> due to overstocking. The rest is reduced in price with the rest being landfilled or incinerated; an incredibly costly and inefficient way of supplying electricity to our homes. A Welsh Mutual Credit offers supply chain restructuring and an opportunity to maximise the value of the millions of tons of food, clothes and other wasted goods in the commercial sector and re-direct it towards Welsh economic, social and environmental good.

Reducing waste in the supply chain, should a Welsh Mutual Credit be set up, is on the verge of being bolstered further.

At the time of writing this report, the community-led alternative currency sector is at the cusp of embracing the benefits of Blockchain and using them to advance the UN’s SDG’s (Sec.1.3.vii). Therefore, the creation of a Welsh Mutual Credit would find itself in a period of great opportunity.

Jem Bendel, head of the Institute for Leadership and Sustainability at Cumbria University, said at the UN conference in Geneva in November 2018:

**“Parallel Currencies, when used with blockchain, can reach enormous levels of efficiency, creating much less waste and increasing sustainability” – Jem Bendell**

Sardex are currently exploring this avenue (Sec.4.8)

## **- A Welsh Zero Waste Household Credit Scheme:**

This autumn (2019), Wales is on track to become number one in the global recycling Olympic podium. A fully mature Mutual Credit system with B2B, B2E and B2C services will have several options to help maintain and build upon Wales's recycling achievement.

Tokenisation for behaviour change was explored under 'Social Currencies' in the previous section. It is perfectly possible and compatible for an all-Wales incentive scheme to be incorporated into the Welsh



Mutual Credit's B2C service (Business to Consumer).

*In Lindbergh in Belgium there was a behaviour change experiment to encourage composting, comparing traditional marketing with providing currency to householders:*

- ⇒ *5 municipalities received a set budget towards a traditional marketing campaign consisting of mailshots, newsletters, phone calls etc.*
- ⇒ *5 municipalities received the same budget to set up a reward token scheme redeemable for local services.*

### ***The Result:***

- ⇒ *2% of the population subjected to the traditional marketing campaign committed to composting food waste whereas*
- ⇒ *30% made the transition under the currency scheme.*

Let us now look to see if a redeemable reward scheme could help contribute to Wales's

There is currently a reported 50% food caddie participation rate amongst households across Wales. Put another way, 50% of all the residual waste collected and not currently recycled in Wales contains organic material.

In 2017/18 there was 405 kgs per dwelling per year being collected across Wales. That's 546,750 tons for its 1.35 million households. 60%+ of this can be instantly recycled according to compositional analysis of residual waste leaving 328,000 of which half, 164,000 tons, is organic. Of total waste arisings, uncaptured co-mingled organic waste accounts for nearly ten percent of Wales's waste.

## **Diverting Organic Waste From Landfill to Become Global Number One Recycler:**

If the tokenisation principle from Lindbergh were applied to a B2C behavioural change credit, a 30% take up rate across Wales would translate into an additional 49,200 tons of organic material collected for recycling, adding 3% to the Welsh recycling figures. In terms of cash savings to Welsh Local authorities, if £90 per ton landfill tax was avoided on 49,200 tons, this would provide a saving of £4,428,000 across Wales. A £200,000 saving per local authority provides the Welsh Mutual Credit B2C scheme future scope to work up business models that are supported by Welsh local government.

### **- Further Impact on Residual Waste in Wales:**

Full household participation in such a scheme, from the figures above, would capture 164,000 tons of organic material currently caught up in outdated co-mingled processes, adding nearly 10% to Wales's recycling figures and saving Welsh Local Authorities £14,760,000 across Wales, just over an average of £670,000 per Welsh Local Authorities.

Placing food waste in a caddy is significantly easier than the home composting activity Lindbergh residents participated in at a rate of 30%. With the right support infrastructure and investment, we would expect the rate for food caddie use, through a tokenisation incentive scheme, to rise beyond an additional 30%. A pilot or a cluster of pilots amongst different Local Authority demographics in Wales would provide definitive baseline figures of course. Beyond the pilot stage, Welsh Government may wish to target individual Local Authorities where participation in food caddie collection by householders is lower than the average 50%, providing even more scope to increase tonnage figures and savings.



This 'Zero Waste Household Credits' would be facilitated through an all Wales Mutual Credit organisation via a B2C scheme similar to the 'Sardex Bisoo'; providing stability, brand confidence and all Wales reach, and keeping consumer spending local. 'Zero Waste Household Credits' is <sup>39</sup> worthy of its name as not only would it contribute another 10% to Wales's

**For Wales's recycling figures, this would also instantly increase the value of the remaining dry materials and the ability to recycle them. This scheme would provide a shot in the arm for Wales's journey 'Towards Zero Waste'**

At the local authority operational end, modest investment would be needed to attach weatherproof scannable RFID Tags, (that would contain help collect the householder participation information) to existing food caddies. A small weighing scale would be added to the kerbside recycling truck upon which the food caddy would be placed; again, not a huge investment. Next to the scale would be a scanner, the technology of which is available within all iphones. Rather than a hand-held scanner to attribute the caddy weight to the particular householder, the scanner could of course be statically integrated into the side of the caddy scales; allowing all data to be collected in a simple procedure. All data from the round could be uploaded on return to the depot or updated in real-time through the truck's GPS system.

If Welsh Local Authorities are making a transition from co-mingled and low-quality material collection to high-end source separation with new infrastructure and investment anyway, these additions recommended above could simply be added in during the changeover.

How would it work? With each B2C purchase in a Welsh Mutual Credit, like the Sardex 'Bisoo' card <sup>23</sup> (Sec.4.2.iii), consumers earn a percentage in Sardex from participating members. In other words, they receive back in credits a part of what they spend in national currency. The credits are accumulated and then spent in the shops and businesses participating in the program. Bisoo card holders have 12 months to spend the credits, i.e. they will expire at the end of each calendar year, but will be reused, always with ethical logic. In fact, the consumer will have another power, apart from earning and spending local credits: they can donate them to local social enterprises of their choice in the system before they expire. If they forget, the system will retire their unspent expired credits and will distribute them to non-profit associations registered in the circuit.

In order to have credits offered to householders in a food caddy participation pilot, the local authority or waste food reprocessor would need to be a mutual credit trading member in order to accrue and provide credits. This would need consideration and scoping at a later design stage. However, there is an immediately clear advantage in such a scheme since it would provide a rationale for the local authorities to collect part of the local tax in credits, thereby creating another sustainable circular flow. A few Sardinian local councils are starting to seriously consider this approach, since for them it also addresses the problem of meagre public sector budgets and, even when the budget has been approved, the chronic shortages and delays in Euro payments from the central government.

### **• 1.3.vi-vii Twin Pronged Economic Approach - Greater Welsh SME Liquidity & £2bn Circular Economy Savings**

Many of the currency schemes visited as part of the study created incentives for their member businesses to reduce waste and increase recycling: Wales could do the same. Waste is waste wherever it exists. Mutual Credit provides Wales with a unique opportunity to now tackle commercial waste with the same successes witnessed with domestic waste.



Over and above the ‘inherent’ benefits of Mutual Credit, laid out in this section, the business planning stage of the Welsh Mutual Credit system may wish to consider including greater commercial recycling within a choice of behaviours, as operated by the Eusko (Sec.6.2). The Welsh Government aim of a Circular Economy will provide net benefit for businesses.

In the 2012 Ellen McArthur Foundation report ‘Wales and the Circular Economy’<sup>24</sup>, it states:

**“analysis suggests that material cost savings of up to £2.0bn a year could be achieved by transitioning to circular processes in an advanced scenario.**

**“reduce Wales’s dependency on raw materials, have a positive impact on the jobs market and increase the value and productivity of agricultural systems**

**kick start a new era of resilient, Wales-centric growth that provides meaningful employment for its citizens and innovation for its industries”**

Whilst Thomas Greco’s advice of not overburdening membership requirements with too many goals must be considered seriously, the benefits of Wales moving towards a Circular Economy is an opportunity that should not be missed.

As set out at the beginning of this section on currency benefits, the Circular Economy has undeniable benefit for the business community. The challenge of transition to Circular Economy business systems is of direct financial benefit as well as being the only long-term choice in the coming decade if Welsh businesses are to become sustainable to the backdrop of raw material scarcity and population rise.

*“there are maybe twenty years left available to save the planet, to find a way to avoid being overwhelmed by millions of tons of plastic and toxic waste”* - Laura Foïs, Sardex Operations Representative suggested (Sardex.net 2019)

The Welsh Mutual Credit System should position itself as a vehicle, in partnership with other agencies, to help in the long-term restructuring of internal business systems. This “double whammy” approach combines the circularity of material and financial wealth in a way that will be radically unique to Wales. This one proposal sits at the very core of this report’s offering.



**This report therefore strongly recommends, above all additional outcomes added to the design, the adoption of the following, as a membership requirement of an MCS in incremental stages:**

**Increment 1. The signing up to a clear Circular Economy statement**

**Increment 2. The creation and adoption of a Circular Economy policy and implementation plan**

**Increment 3. Receive assistance to transcend to circular economy practices and report on achievement.**

**Increment 4. Receive assistance to account and report on progress into the future.**

### • 1.3.viii Advancing Universal Basic Income:

*"...the potential for blockchain lies in its architectural ability to shift, and potentially upend, traditional economic systems – potentially transferring value from shareholders to stakeholders as distributed solutions increasingly take hold"*

and that:

*"...such transformative changes will not happen automatically. They will require deliberate collaboration between diverse stakeholders ranging from technology industries through to environmental policy-makers"*

As referred to at the UNCTAD session in Geneva in October, complementary currencies provide a large-scale approach to tackling inequalities within our economies and help the UN towards its Sustainable Development goals as well as those of Wales's Wellbeing of Future Generations Act <sup>26</sup>. This report provides Wales that opportunity (Fig.3)

Within the REC currency <sup>27</sup> (Sec.1.3.viii) in Barcelona sits an incredibly innovative experimental pilot aiming to 'end poverty for good'. If Wales establishes a Mutual Credit system, it will be part of an emerging European network keeping a pace with innovation.

Susana Belmont, CEO for the scheme, describes the ambitious aim:

*"We want to learn how to combat poverty using local tools at our disposal. Our aim isn't to combat poverty, our aim is to end poverty"*

The City Council, with assistance from the EU, top up the household incomes up to the desired 'guaranteed minimum income' level. Half of the families (500) must convert 25% of their top up subsidy into the City's REC currency. Before the launch, NOVACT, who run the scheme, had to ensure that there was a minimum number and spread of local businesses signed up before going ahead, covering food, clothes, books and transport. The pilot which started in October 2018, runs for a year.

Within one month of the pilot last Autumn (2018), businesses were reporting new sales. 90% of food shopping, according to social services in Catalonia, was being undertaken within large supermarket chains. One month in and 75% of REC participant families' food budgets (using REC and Euro) was going to locally owned food stores.

With a REC App, users can carry out any transaction and put RECs into circulation. Its functions include paying to shops and receiving payments from customers, sending money to another person and monitoring all transactions. The details of how a complex system of paying and backing can be facilitated in one process is explained in section 4.6's focus on electronic platforms.

Following the research visit with Susana, and as an exclusive for this report, she provided the following insights into what she hopes the Barcelona pilot will show and how it will help combat poverty:

Ref: <sup>26</sup> [http://www3.weforum.org/docs/WEF\\_Building-Blockchains.pdf](http://www3.weforum.org/docs/WEF_Building-Blockchains.pdf)

<sup>27</sup> <https://rec.barcelona/en/how/>

1. “Effectiveness We need to prove that the 500 families who received the 25% of their guaranteed minimum income in RECs were able to use it to buy goods and services to fulfil their basic needs, which was the purpose of the subsidy. This entailed early trials looking at the payment app and its functionality and that we were able to engage enough shops into the scheme”.

2. “Higher political acceptance of the guaranteed minimum income. Previously the rate of expenditure in local shops of subsidies was 10%, the other 90% was going to big supermarket chains. So, the distribution of this subsidy with the condition that 25% of it must be spent in the citizen currency is already benefiting the local SMEs, by increasing their sales. We expect that this will improve in line with the general acceptance by the population of the subsidy itself”.

3. “Higher aggregated income in the local area. We expect also that we will be able to register a higher economic multiplier of the local government spending in the scheme, which might demonstrate that the same government spending can produce a higher aggregated income in the area. For this, we hope that the recirculation rate (the percentage of the income received in RECs by local SMEs that is spent in RECs and not changed back to euros) will continue increasing, as it has so far”.

4. “Strengthening of the social networks and links in the area: we hope that the program will help the recipients of the subsidy to better integrate in the local community and to increase the social capital (more participation in the local associations and initiatives)”.

5. “In relation to how the citizen currency helps to get the participants out of poverty, indirectly, it is linked to the increase in the level of digital literacy and the creation of social/ neighbourhood networks, as well as its involvement and participation with other policies of the BMINCOME project<sup>28</sup> itself that reinforce the capacities and abilities of the participants, beyond the obtaining of the guaranteed minimum income in RECs”.



**Wales joining the European complementary currency sector with its own system, should look at the results of the Barcelona Universal Basic Income pilot when it is published in the Autumn of 2019. Results to date as reported above look very interesting indeed.**

### • 1.3.ix Heritage, Culture & Tourism Opportunities:

Across Sardinia’s 60 municipalities, Monumenti Aperti<sup>29</sup> (like Cadw) has an ‘Open Monument’ scheme boasting 1000 accessible monuments. Sites not previously accessible to Sardinia’s public and tourists have been opened, connecting people and their hidden history across hundreds of communities across Sardinia.

Wales has an untapped resource of such sites.

Monumenti Aperti used to be 100% publicly funded before the downturn; supplementing with additional sponsorship still left a shortfall challenge. Sardex was the first organisation to step in and to pay for advertising in their brochures. This in turn brought in hundreds of other Sardex users doing the same, bolstering tourism, heritage and cashflow.

The printing of 150,000 brochures advertising the scheme across Sardinia was paid for using Sardex credits. These credits, earned by charging Sardex members to advertise in the brochures, were then spent on the goods and services they needed to procure anyway, thus plugging an operational shortfall. Monumenti Aperti used earned Sardex to buy merchandise such as pens, bags, t-shirts and caps locally to promote their scheme further. Through the Sardex brokerage, the marketing for this scheme didn't cost any euros at all. Sardinia-wide marketing without spending a single euro.

The campaign across Sardinia has led to 350,000 visits to 800 newly opened monuments involving 24,000 volunteers. The volunteers have been involved in providing interpretation for the new flow of visitors as well as preparing and maintaining sites. Economy, people and heritage all in one and all free.

The groundswell of support resulting from this has captured people's imagination across Sardinia leading to successful funding bids to restore forgotten monuments and not just clean them. Students have been involved in this work as part of their studies, increasing the knowledge of Sardinia's built past and placing its future in the hands of the next generation.



The CEO of Monumenti Aperti cites Sardex as helping from the beginning and **“leading where others followed”**.

This was one of the first ‘cultural’ organisations to join the Sardex scheme.

The additional pillar of Wales's Future Generations Bill is culture and language. Therefore, the lessons of Monumenti Aperti in Sardinia combined with the efforts to promote bilingualism in the private sector (Sec.1.3.x) without the need for legislation makes a Sardex style Mutual Credit for Wales highly attractive.

The organisation is now very creative in how they utilise the Sardex credits. Costs of running the centre, paying for goods and services in Sardex are often at a rate of 50%. Before joining Sardex they would pay €5-8k per annum in interest on various loans whereas now they procure as much as they can in Sardex as a negative balance has no interest.

To explore the impact of complementary currency on culture further, let's look at Teatro Massimo <sup>30</sup>, Cagliari's largest theatre, considered to be Sardinia's prime theatre. Theatre projects that reach out to the community, either multi location or in terms of involving difficult to reach demographics, are often part of Arts Council for Wales funding; the same in Sardinia. A focus on building community bridges has provided an opportunity to spend and earn Sardex and galvanise the links further.

The CEO of Teatro Massimo feels that:

**"the venue is a town square, a way to cooperate with local partners and make connections day to day"**

Teatro Massimo earn Sardex credit by:

- (a) renting the theatre out to the community in return for Sardex
- (b) accepting Sardex credits from employees of Sardex member companies who have credits provided to them through the Business to Employee scheme (B2E Sec.4.2.ii)
- (c) charging local businesses in Sardex to have stalls in the foyer.

In terms of spending the credits, around 15,000 Sardex comes into the theatre per annum and this is provided to actors for their expenses which in turn goes back into local food outlets as well as local taxis etc.

### • 1.3.x Incentivising Bilingualism in the Private Sector

Mutual Credit could provide Wales with the vehicle to help businesses embrace bilingualism, basic greetings and signage.

The Eusko in Bayonne encourages ownership of and commitment to its membership conditions by providing choice (Sec.6.2). From a list of three business transitions, all designed to benefit the business, they must commit to undertake one from the list. All the business transition choices are provided with developmental support from partnering organisations; allowing the Eusko to concentrate on running the currency. One of the three is to make a transition to a visually bilingual business premises: French and Basque.

Choice is embedded even further, so if a business chooses to commit to the bilingual option, they can either:

- (a) receive training to master some basic Basque words for business; 20 hrs spread over an eight-week period providing basic words and greetings. The programme is designed by a Eusko partner specifically for Eusko member businesses. The Basque language academy that provides the scheme for the Eusko deals with the planning and logistics, gathering 4-5 people together for each class they timetable.
- (b) agree to make shop signage bilingual. Eusko partners pay for the translation and the business just agrees to pay for the printing. The scheme covers such things as signage and e.g. menus for cafes and restaurants. With something like a menu, a haircut price list etc, (essential day to day visual tools) businesses can come back four to five times a year to get free updates.

To see a practical example, as part of this report, an interview took place with a beehive products shop selling honeys from across the Basque country in the centre of Bayonne. The shop worker was interviewed for this report. Her boss had adopted the Bilingual scheme, choice (a), to undertake basic Basque business phrases training. The shop owner uses his earned Eusko and pays for her to be sent for Basque phrase lessons once a month using Eusko. This provides an incentive from day one to start accepting and earning Eusko currency to be used creatively elsewhere. The shop worker said that this provides an extra skill to connect, how to count, to say hello and give directions etc. Dante, CEO of the Eusko maintains:

**“Business people love it: it’s an extra skill to have to connect with customers”**



**As is the case in Wales, the Northern Basque country has public sector bilingualism by statute, but not for the private sector. This Basque scheme, if incorporated into the Welsh Mutual Credit system, would provide progression towards bilingualism in Wales’s shops and would be owned and embraced from the bottom up as a business tool to connect with wider markets.**

To get young people to believe that Basque has value and to have the confidence of using it, Dante argues for its inclusion within business spaces, where working people spend most of their days.

The argument for and against a new Welsh language act covering the private sector has been present for many years in Wales. The approach outlined above provides an inclusive, creative and business focused means of enabling change across Welsh community.

Like the Welsh situation, the very young and very old speak the minority language due to recent efforts to incorporate Basque within schools. The 40-60 age group have very little or no Basque at all, therefore business owners are a great cohort to target. Such a scheme would provide the opportunity to use basic Welsh in any part of Wales on any high street.

*“When you leave school you leave Basque, you find it again in the morning. Young people, who have but don’t use Basque, need to feel confident to use both languages. Seeing both languages visually helps provide the validity and confidence needed”*  
- Dante, CEO of the Eusko.



## • 1.3.xi Advancing the Welsh Social Economy

There are several ways that a Mutual Credit system could advance the agenda of social enterprises in Wales. Regardless of sector, additional credit could be sanctioned for businesses committing to triple bottom line or social impact assessment. The full-scale impact of businesses operating a triple bottom line model should be recognised and encouraged. This would be open to any business in any sector committing to making a triple bottom line transition:

**Businesses where natural resource exploitation is reduced and eradicated**

**Businesses where the operation of the business isn't detrimental to the interests of the people and communities that sustain the business**

**Businesses where the income generation model is harmonious with people and community in order that its economic sustainability provides a platform long term for people's careers and dreams.**



**Extra credit could be provided to the businesses described above or committing to triple bottom line accounting. This ensures that investing in the sustainability of supply chains, materials and communities can be incentivised beyond the Social Economy sector.**

Most of the models visited in Europe make it cheaper for the social enterprises to join especially in the case of the Sardex who also work with third sector agencies that struggle with cashflow such as art and heritage organisations.

*"In the Sardex model, there are ways to create the support mechanisms for social enterprises as needs arise and change"* – Paolo Dini

Within the mechanics of various complementary systems, social enterprises delivering strategic goals are supported with additional currency to spend (Fig4). Within the Eusko and Chiemgauer convertible models (Sec.6.2 Fig 14) the bulk of the 5% penalty charge, (3%) is given to local social enterprises when businesses convert back to national currency. Whilst 95% of the converted Eusko leaks back into the main economy, which is the main criticism of convertible complementary currencies, the 5% is spent locally. A football club using Eusko will ask members to open a Eusko account, as the contributions help to pay for the sport shirts. The member organisations become the recruitment driver.

In terms of the size of this contribution to the social enterprises, the Eusko last year (2018) distributed 19,000 Eusko, with a local goods spending power of the same figure in Euro. The Chiemgauer, operating for a bit longer, distributed 60,000 (but to a larger population) around 660,000 in total since the start up in 2013

	Social Enterprise Contribution	Currency Population Area	Wales projection
<b>Eusko</b>	19,000 Euskos (2018)	Population: 295,000	<b>Circa £165k</b>
<b>Chiemgauer</b>	60,000 Chiemgauer (2018)	500,000	<b>Circa £278k</b>
<b>Sardex Bisoo (B2C)</b>	12-month projection of 40,000 Sardex <i>(Based on 10% of the 100,000 Sardex contributed to Bisoo Card holders in a 4-month period since the October 2018 launch to January 2019)</i>	1.653 million	<b>Circa £54k</b> <i>(Could be doubled, see recommendation opposite)</i>

A per capita increase (and converted to £ sterling) shows what each scheme would provide Social Enterprises in Wales: With the Sardex Bisoo (B2C) scheme turning over an impressive 1 million credits through the Sardinia economy in three months since its launch, 5%-10% of that is earned by consumers in Sardex, credited to their Bisoo card by the Sardex member shop as a loyalty payment for spending Euro in there. For comparison, the value of standard supermarket loyalty points schemes is less than 1% of the amount spent. This 5%-10%, in Sardex, can then be spent by the consumer ploughing wealth back into the local community of Sardex member businesses. Bisoo card holders must agree that 10% of the Sardex credit they earn be donated to local charities (there are currently 50 non-profit social and cultural associations in the circuit) as well as donating to social enterprises if they don't spend them by the end of the year. In Wales, we could ensure that only beneficiary Social Enterprises pursuing the sustainability goals of the Future Generations legislation should be eligible.

**Based on the higher figure contribution of B2C provision within the Eusko and Chiemgauer local currencies, this report recommends: rather than a 90/10 Sardex Bisoo split between local spending and local charity donation, that a Welsh Mutual Credit B2C scheme considers an 80/20 split. This would provide a scheme to the value of £125k in local credits supporting Social Enterprise.**



In terms of loan finance for the Social Economy (Sec.1.3.iv.) as with the Swiss WIR and the Sardex Italian mainland replications, a loan system partnering with a community bank can offer loans in 50/50 Mutual Credit and Euros. If replicated in Wales, a Mutual Credit partnering with a Community Bank could offer very low interest developmental loans as the mutual credit part of the loan is interest free. Combined with a certainty that at least 50% of the hybrid loan would be spent in Wales, the financial products offered by a Mutual Currency in Wales would be very appealing to Social Enterprises.

Finally, within the 3rd sector where cashflow is a constant challenge, there's scope, through Sardex, to maybe fund a jointly run building as opposed to revenue for the individual deliverers. A level of resilience for 3rd sector operators in fields such as drug use/abuse and refugee services etc. and support for the informal economy can be done in an optimised way.



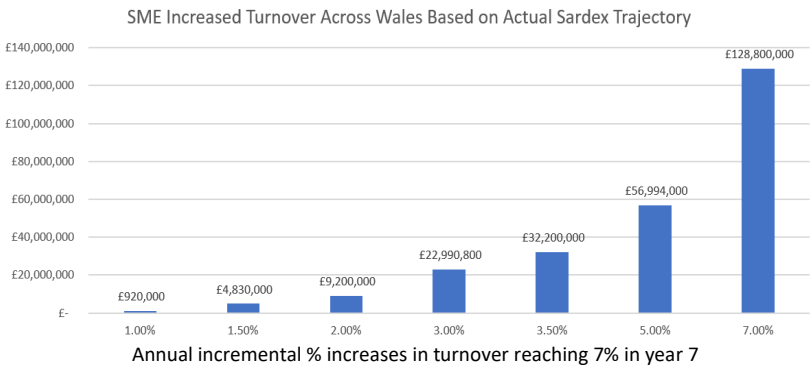
• **1.3.xii Additional Turnover Projections for Welsh SME's using the 7% average experienced by Sardex:**

Dr Paulo Dini LSE and Sardex SpA conducted interviews with the Sardex membership in year seven of the operation and found that the B2B members, on average, were generating an additional 7% turnover.

With a starting point of £46,000,000,000 total turnover for all Welsh SME's (Stats Wales), the following graph projects the 7% experienced in Sardinia over a 7 year period from start up of a Welsh scheme. Year 7 being the point at which the Sardex collected the data.

The proportion of total Welsh SME turnover dealt with in the columns mirrors the proportion of Sardinian SME's who joined the Sardex from year to year, taken from the Sardex's own membership figures (Sec.2.1.iii)

Built into the graph is an assumption that the 7% increase of turnover wouldn't have been achieved in year one. The graph therefore shows the rise in turnover in incremental stages over the seven year period, with the incremental percentages shown at the bottom of each yearly columns.



**KEY FINDING:**

If Wales followed the same trajectory as Sardinia, the impact upon the Welsh economy would be an estimated additional turnover of nearly £130 million for year 10 or a cumulative figure over the first 10 years of £256 million

*NOTE: If we want to consider the full projected economic impact on Welsh SME's, by providing a Welsh Mutual Credit, we should also look at millions saved (sterling) in Welsh SME accounts through a portion of B2B transactions being cashless Mutual Credit (Sec.3.8).*

*Both key findings are combined in the executive summary.*

### • 1.3.xiii Bringing Wales's Available Resources into Circularity, e.g. a Welsh Attic Amnesty:

The Welsh Mutual Credit system will provide a means for the Welsh Government to target new strategic challenges as they arise. Many strategic goals, e.g. Towards Zero Waste (explored and evidenced in Sec.1.3.v) or new innovation around Universal Basic Income (evidenced Sec.1.3.viii) or indeed any other social or environmental issue Wales should ever face can be accommodated and focused upon. The beauty of a Mutual Credit scheme is that it can house different behaviour change goals strategies across its business, employee and consumer platforms (Sec.4.2.i-iii).

By utilising the Business to Consumer service, that could be developed following the initial 2-3 year start up period after building sufficient Business to Business B2B ) members, future government strategic goals can be considered. Any business or public sector organisation earning Mutual Credit can spend or 'reward' it by a thousand and one ways and we can design future operations to meet future needs: always staying ahead of the curve.

In the case of Sardex Bisoo, (Sec.1.3.xi and 4.2.iii) Sardex business members provide 10% back in local Mutual Credit when a customer makes a purchase in €Euro. Customers donate the credits to local social enterprises if they're not spent by the end of the year. This is only one way businesses with Credits can use them. In this case of course, it operates as a loyalty scheme. Like the Social Currencies (explored in Sec.6.1).

Provided here therefore is a case study to demonstrate how the Welsh Mutual Credit might be used. Circular Economy Wales, who present this report, believe in the circularity of resources as well as wealth. There are a number of 'waste' amnesties that could be designed, publicised and rolled out using credit awards. Let's first explore the idea of an 'Attic Amnesty'. Waste amnesties helps reduce material entering the waste stream.

Laying forgotten within the attics, spare rooms and sheds of Wales's 1.35 million homes, is a load of STUFF. We estimate each house to be hoarding an average of at least one tonne of bric-a-brac and recyclable material. It is almost impossible to estimate the saleable value of such material if channelled through a community reuse facility.

Jenny Simms, CEO of Pembrokeshire Frame, reflected on this question

**"The saleable value of an average tonne of bric-a-brac collected through local amnesties would obviously differ wildly depending on what it is. £150 per tonne would be a minimum guess,".**

So, forgotten within houses across Wales sits an estimated minimum of £202.5 million worth of materials that could be reused or reprocessed; a local cash injection for community reuse social enterprises and the jobs created within them. It isn't envisaged that such volumes would be brought within the Welsh economy in one swoop; but instead a slower feed of goods and income over the long term. The human tendency of hoarding can't be simply switched off en-masse. The Welsh Attic Amnesty should therefore be a long-term business opportunity to help the liquidity of our community reuse businesses across Wales and an injection of wealth. Again, payment using a currency (as with the Lindbergh pilot) would unlock this potential.

The challenge for all members of complementary systems is finding desired spending opportunity within the circuit that fulfils the business aims. The Welsh Attic Amnesty would offer reuse organisations the opportunity of spending earned Mutual Credits to purchase saleable and profitable items. These transactions would, in turn, help their Sterling liquidity. These Mutual Credits, in the hands of Welsh householders, could be used to purchase any of the goods or services available across Wales within the circuit.

De-clutter — help Wales and help yourself.



**A Mutual Credit scheme with an all-Wales reach and branding would be in a unique position to develop an innovative business tool for its reuse members across Wales. Community reuse groups, as well as charity reuse groups.**

**Credits awarded by a Social Enterprise would be spent by householders within the wider network of member businesses, circulating the wealth around Wales.**

## • Possible Future Amnesties:

- Bicycles
- DIY surpluses, paint etc
- Toys
- Old clothes
- Electrical waste
- Furniture
- Wood

## • Collection, Payment and Distribution Infrastructure:

Circular Economy Wales has been in discussion with Travel for Wales. An idea backed by the Future Generations commissioner has been pursued, that dormant rooms in Wales's railway stations, could become Zero Waste exemplars housing material and amnesty collection points and community reprocessing units under the branding of the Welsh Government backed 'Green Shed' Pilot in Pembrokeshire Frame in Haverfordwest. Community micro-reprocessing allows community groups, schools and individuals to turn waste into almost any product they can imagine.

From such collection points a number of beneficiaries can be supplied in order to circularise the flow of material in Wales. Social enterprises have a great track record of turning material resources into profit and social good. Public bodies wishing to renew and re-energise their workspaces, now considering moving to circular models when re-designing workspaces to fit employees needs (as with Public Heath Wales, 2019), can have access to reuse material also.

- **1.4 Alignment with Welsh Legislation, Policy Commitments and UN Sustainable Development Goals:**



#### **1.4.i Easing cashflow challenges of Welsh SME's with a Mutual Credit helps advance:**

1. **Proposal 1 of the Foundational Economy section from Mark Drakeford's Leadership Manifesto aims at:** *"promoting continuity of ownership for SMEs, keeping successful firms locally rooted and building a firm base of medium sized Welsh firms".*

#### **1.4.ii Safeguarding Welsh jobs (closer to home) with Mutual Credit helps advance:**

1. the **'More Equal Wales'** goal of the **Wellbeing of Future Generations Act** aims to *"enable people to fulfil their potential no matter what their background or circumstances (including their socio-economic background and circumstances)".*
2. the **Wales of Cohesive Communities** goal of the **Wellbeing of Future Generations Act** aims to *"help build attractive, viable, safe and well-connected communities".* The Jobs closer to home agenda, which Mutual Credit advances by strengthening the SME sector, helps build that vision.
3. the **'Prosperous Wales'** goal of the **Wellbeing of Future Generations Act** by helping build *"an innovative, productive and low carbon society ...which develops a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work".* The way in which a Mutual Credit system seeks to plan economic stability for the **'Long Term'** and seeking **'Prevention'** of needless SME business failure and lost jobs fits with two of the strategic **'Ways of Working'** required by the act.

*Note: The low carbon part of this advancement is underpinned by the benefits in the following sub-sections: Stimulating Local Supply Chains, Reducing Waste and Advancing the Circular Economy, Circular Economy Savings.*

#### **1.4.iii Stimulating Local Supply Chains in Wales with Mutual Credit helps advance:**

1. a reduction in the miles of shipped goods and the reduction of bulk buying of inappropriate quantities and consequent waste disposal. This inherent benefit of a Mutual Credit system helps advance the **Prosperous Wales** goal of the **Wellbeing of Future Generations Act** which for: *"an innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately (including acting on climate change).*

#### 1.4.iv Credit for Welsh SME Investment with Mutual Credit helps complement:

1. **Proposal 4** from the Community Banking section of the Mark Drakeford Leadership manifesto suggests that small business loans could be provided through the new Community Bank. The need for loans with interest will be significantly reduced with a Welsh Mutual Credit being put into operation and would therefore ease the burden upon the Community Bank.

#### 1.4.v Reducing Waste, and building the Circular Economy helps advance:

1. the **'Economy' section** in the **Mark Drakeford Leadership Manifesto** which aims *"to move away from the 'take, make, dispose' linear economy model towards a circular economy*
2. **Proposal 2** in the **'Environment' section** of the **Mark Drakeford Leadership Manifesto**: Proposal 2. Promote green industries which enhance, rather than damage, the environment.
3. **Towards Zero Waste and the Reuse Roadmap Strategy**
4. **Part 1 of the Environment Act (Wales)** which aims at improving *"Sustainable management of natural resources – (which) enables Wales' resources to be managed in a more proactive, sustainable and joined-up way. It also helps to tackle the challenges we face and is focused on the opportunities our resources provide"*.
5. current and future **Carbon Budgets** underpinned by **Part 2: 'Climate Change'** of the **Welsh Environment Act (Wales)** under which Welsh Ministers' powers set statutory emission reduction targets
6. **Part 4 of the Environment Act (Wales)**, that aims for *"higher levels of business waste recycling, better food waste treatment and increased energy recovery. This will help to decrease pressure on natural resources while also contributing towards positive results for both the economy and the environment"*.
7. the **Prosperous Wales** goal of the **Wellbeing of Future Generations Act**, aims to build *"an innovative, productive and low carbon society which recognises the limits of the global environment and therefore uses resources efficiently and proportionately"*
8. the **Resilient Wales** goal of the **Wellbeing of Future Generations Act**, *which aims to build "A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change"*
9. the **Globally Responsible Wales** goal of the **Wellbeing of Future Generations Act**, which aims to build *"a nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being"*.

#### 1.4.vi Liquidity & £2billion Circular Economy Savings with Mutual Credit

#### 1.4.vii Universal Basic Income with a Mutual Credit helps advance:

1. **Proposal 1** from the **'Equalities' section (Women)** in the **Mark Drakeford Leadership Manifesto** which aims at *"Promoting equality through the fair work agenda of the real living wage and closing the gender pay gap"*.
2. **Proposal 1** from the **'Economy' section** of the **Mark Drakeford Leadership Manifesto**: which aims at *"Promoting equality through the fair work agenda of the real living wage and closing the gender pay gap"*.
3. the **More Equal Wales** goal from **The Wellbeing of Future Generations Act** which aims at *"enabling people to fulfil their potential no matter what their background or circumstances, including their socio-economic background and circumstances"*.
4. The **Wales of Cohesive Communities** goal which aims at *"helping build attractive, viable, safe and well-connected communities"*.

#### 1.4.viii Heritage, Culture & Tourism Opportunities with a Mutual Credit helps advance:

1. the **Wales of Vibrant Culture and Thriving Welsh language** goal from the **Wellbeing of Future Generations Act**. The act covers public sector agencies that could utilise the Mutual Credit system like heritage and arts organisations in Sardinia have been successful in doing.

#### 1.4.ix Incentivising Bilingualism in the Private Sector with a Mutual Credit helps advance:

1. the **Wales of Vibrant Culture and Thriving Welsh Language** goal from the **Wellbeing of Future Generations Act**.
2. **Proposal 1** from the **'Welsh Language' section** of the **Mark Drakeford Leadership Manifesto** which aims to *"Ensure the delivery of our strategy Cymraeg 2050 – a Million Welsh Speakers"*.
3. **Proposal 5**: from the **'Welsh Language' section** of the **Mark Drakeford Leadership Manifesto** that aims to *"Ensure that the Welsh language is an essential consideration in our Economic Action Plan and that an appreciation of the value of bilingualism is integrated into our economic development activities, including in skills development, support for the foundational economy and in expanding our digital and export services sectors"*.

#### 1.4.x Additional Turnover for Welsh SME's with a Mutual Credit advances:

1. the **Prosperous Wales** goal from **The Wellbeing of Future Generations Act** which aims to *"develop a skilled and well-educated population in an economy which generates wealth and provides employment opportunities, allowing people to take advantage of the wealth generated through securing decent work"*.

#### 1.4.xi Advancing the Social Economy with a Mutual Credit helps advance:

1. the **Wales of Cohesive Communities** goal from **The Wellbeing of Future Generations Act** which aims at *“helping build attractive, viable, safe and well-connected communities”*.
2. the **Prosperous Wales** goal from **The Wellbeing of Future Generations Act** which aims at providing *“employment opportunities, allowing people to take advantage of the wealth generated through securing decent work”*.
3. the **Resilient Wales** goal from **The Wellbeing of Future Generations Act** which aims at building *“A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).”*
4. the **More Equal Wales** goal from **The Wellbeing of Future Generations Act** which aims at *“enabling people to fulfil their potential no matter what their background or circumstances”* (including their socio-economic background and circumstances).

#### 1.4.xii Provision of a Mutual Credit helps the Welsh Government consider other future strategic needs and challenges by:

1. developing Wales’s Mutual Credit model and extending its money saving and additional turnover mechanism into the Public Sector and helping fulfil **Proposal 2 ‘Economy’** from the **Mark Drakeford Leadership Manifesto**, to *“Redesign the way in which government invests in economic growth, so that public investment has a social purpose and a commitment to equality, and so provides a return to the public purse”*. Mutual Credit provides that redesign.
2. providing future opportunity to expand beyond an established and proven SME base to include the Public Sector at some stage in its development. This would help advance the **Foundational Economy** section of the Mark Drakeford Leadership Manifesto.
3. **Circular Economy Wales CIC** will be working closely with Paolo Dini of the Sardex, a former renewable energy consultant, to replicate a Mutual Credit system in Wales that can invest in renewable energy start-ups. This would help advance **Proposal 1 ‘Energy’** in the **Mark Drakeford Leadership Manifesto**

#### 1.4.xiii Fulfilling Wales’s Global Legislative and Policy Commitments:

1. The **Globally Responsible Wales** goal from **The Wellbeing of Future Generations Act** which aims at building *“a nation which, when doing anything to improve the economic, social, environmental and cultural well-being of Wales, takes account of whether doing such a thing may make a positive contribution to global well-being”*.
2. **Proposal 4** from the **Mark Drakeford Leadership Manifesto** which aims at *“Working with partners across all sectors we will develop a comprehensive international strategy to go on giving Wales a powerful voice in Europe and beyond.”*

## - UN Sustainable Development Goals:

*“There has been decades of deliberation and carbon emissions continue to rise. Action has been an add-on not a starting point. We should consider the need to transform our economic system and transform it fast” – Jem Bendel - at the UN’s first intergovernmental session on alternative currencies, in Geneva - November 2018.*

The UN’s Sustainable Development Goals (SDGs) <sup>25</sup> will cost an estimated \$12.5 Trillion a year. We need other financial tools to be able to contribute to this bill, and this is what this report provides Wales. At the above meeting, organised and addressed by Jem Bendel, the UN announced that in January 2019 a \$350m grant scheme would be made available to develop blockchain solutions that can deliver on the UN’s SDGs and work with similar initiatives around the world.



Kitchen knives are incredibly creative tools in the right hands, providing a multitude of creative dishes that sustain us. Blockchain, like kitchen knives, can inflict harm. There is a real desire now amongst UN agencies and the leaders of complementary currency systems, to harness the benefit of blockchain to drive SDGs, enhance operations and provide transparency to supply chains. On the international stage, Mutual Credit schemes utilising the traceability of blockchain can lead member businesses away from supply chains fed by conflict minerals, blood diamonds, palm oil and profiteering from human trafficking and human rights violation.

Present day Wales, from the Government of Wales act onward, strives towards sustainable best practice at home but is also internationalist. A Mutual Credit system for Wales allows us to lead by example on the global stage.

Many of the currency systems visited as part of this report are now looking at the practical uses of Blockchain to underpin triple bottom line aims. The ‘Building Blocks for a Better Planet’ report was published in September 2018 by the World Economic Forum and it cites 65 case-uses for blockchain that could accelerate the UN drive to manage environmental resources.

Ref: <sup>25</sup> <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

<sup>26</sup> [http://www3.weforum.org/docs/WEF\\_Building-Blockchains.pdf](http://www3.weforum.org/docs/WEF_Building-Blockchains.pdf)



<u>GOAL 1: No Poverty</u>	REC Pilot, Minimum Income Guarantee Scheme, the findings of this pilot will be available October 2019 (Sec.1.3.viii)
<u>GOAL 3: Good Health and Wellbeing</u>	Mutual Credit systems are designed to stimulate local, resilient and sustainable economies where people can lead connected healthy lives sourcing local food, goods and services
<u>GOAL 5: Gender Equality</u>	Gender equality in terms of access to jobs and careers is increased when local economies are strengthened, and supply chains become more local (1.3.iii)
<u>GOAL 7: Affordable and Clean Energy</u>	The currency schemes studied have many examples of enabling transition to renewable energy through the membership services and hybrid euro and mutual credit/local currency loans (1.3.iv)
<u>GOAL 8: Decent Work &amp; Economic Growth</u>	Mutual Credit systems build liquidity within local SMEs and Social Enterprises allowing those sectors to stabilise and plan for growth. (all sections)
<u>GOAL 9: Industry, Innovation and Infrastructure</u>	Per capita, SMEs and Social enterprises are a source of incredible innovation within Wales. In the field of local food production, reuse, renewable energy, Mutual Credit helps strengthen and develop local innovation
<u>GOAL 10: Reduced Inequality</u>	Mutual Credit systems provide credible and proven means of tackling high street desertification, stabilising the local job market and reducing the economic, inequalities prevalent within contemporary society
<u>GOAL 11: Sustainable Communities</u>	This is the core agenda for the Mutual Credit System
<u>GOAL 12: Responsible Consumption and Production</u>	The report offers a twin pronged approach: increased liquidity combined with incentives and support to transcend to a circular economy
Goal 13: Climate Action	Complementary currencies help reduce supply chain mileage. The circular economy goals of this report also enable Wales to move from an extractive system and soil degradation to true circular resource management

Fig.3



## - 2.0 Mutual Credit in Practice

“To understand how Sardex works, it is helpful to abandon much of what you may think you know about money. There is no bank that prints Sardex notes; no algorithm that generates Sardex digital coins. Instead, it functions as a system of mutual credit: each firm begins at zero, earning the digital currency, equivalent to but non-exchangeable with the euro, as it offers goods or services to others in the network” – **Financial Times 2015** <sup>31</sup>

Put another way, the Mutual Credit system for Wales, through business to business swapping of goods and services, provides a parallel purchasing and accounting option whereby a business is not solely reliant upon Pounds Sterling income to deal with the monthly cashflow to stay afloat. When businesses in Wales have this option in their toolbox, it will provide greater resilience to weather the storm of any current or future economic downturn dictated by global events and financial systems beyond our control.

For anybody uncertain about Circular Economy Wales setting up such an initiative I’d say this: do you want massively fluctuating levels of unemployment as we’ve witnessed cyclically in Wales down the decades, or do you want to back what has worked elsewhere? Sardex in Sardinia stopped hundreds of businesses going to the wall during the recent 2008 world economic downturn. That is why Circular Economy Wales is working with the SARDEX in Sardinia to bring the best kept secret of business stability to Wales. Wales’s 259,200 businesses employ 1,159,900 people (Stats Wales 2018) Let’s keep it that way.

Someone tells you about Wales’s Mutual Credit system that Circular Economy Wales has launched. From the hundreds of small Welsh businesses in the circuit, they tell you that there is a firm in your locality that can supply you with the heating system. It arrives and it is installed – and you haven’t had to dip into your monetary/pound sterling account. You’ve now got enough to pay your bills; your restaurant stays open. So how is the heating paid for?

The heating company has earned 2,000 circuit ‘credits’ for installing the system in your restaurant. This is better than, for example, them coming to eat in your restaurant 100 times for a £20 meal each time in a barter exchange. The system allows spend of the credits anywhere within the Welsh membership of the scheme. Why 2,000 credits? How does the Welsh Mutual Credit system arrive at this arbitrary value? Quite simply, it isn’t arbitrary.

The credits are an ‘equivalent’ to the pound value of the goods (the credits are pegged 1-1 to the pound). Remember, mutual credits aren’t convertible to ordinary currency: the unit of account is the same, but they can’t be exchanged. They are not tied to (backed by) reserves within national banks or vaults of gold. The debts and credits are only underpinned by the goods and services themselves, the goods and services here in Wales. The heating company we’ve presented here usually sell the heating units for £2,000 so they will be positive +2,000 mutual credits after the transaction, which they can then spend at the same value elsewhere within the membership on any one or more of thousands of goods and services.

The restaurant owner’s account balance, on the other hand, is now at -2000 credits. He/she will have 12 months to recover the debt, *which is towards the circuit rather than towards the heating contractor* — hence ‘mutual’ credit. This is done simply by selling meals to other members of the circuit.



*Note: to see this Sardex transaction (using the Cyclos platform) filmed during the interviews for this report, click on the picture if reading this report in an electronic format, otherwise search ‘Sardex Transaction’ in youtube. Link address the footnote below.*

Thus, a mutual credit account is designed to fluctuate between credit and debt from day to day (or on a longer time scale). The net result being small businesses getting what they need whilst easing the cashflow challenges for everything else on their balance sheet, such as transactions that must be done in pounds sterling such as the mortgage, wages, taxes, etc. As this is a self-contained system, sitting outside but parallel to the financial system, it means you’ve spent no money. We’ve swapped goods and kept our finances healthy and overall the net result of the scheme’s activities has helped create a more resilient, productive and potentially more diverse economy. That’s all it is... there’s nothing here that would scare the horses.

A Mutual Credit system is ‘non-convertible’, i.e. you can’t change it for national currency. It could be said that it complements the monetary system, sitting alongside, by limiting its extreme flaws; especially at a human level. It is this, above all else, that has been missing from the current system; a system beyond any doubt that teeters from one financial crisis to the next with almost predictable regularity – remember Boom-Bust.

The ‘Basel Accords’<sup>32</sup> that force banks to weigh credit risk unfavourably and unfairly against SMEs. SMEs can’t get loans, and when they do it’s a higher interest than large companies. The only SMEs who can get loans are the ones who don’t need them.

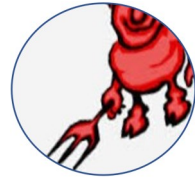
As Paolo Dini from Sardex explained:

*“a mutual credit system goes back to relationship banking because its effectiveness can be greatly improved by introducing a team of brokers who help supply and demand meet. In the Sardex system, the brokers are employees of the Sardex company and there are no commissions charged on successful brokering events. Consequently, it is easier for the brokers to develop a more personal and trust-based relationship with the businesses they look after”.*

There are of course huge sustainable development benefits in terms of reducing distribution costs by coordinating local supply chains in this manner. With the help of the brokers, waste in the system can be vastly reduced through synergies in the supply chains, enabling Wales to climb ever closer to its Zero Waste goal.



- **2.1 FAQ's or 'Devils Advocate' Questions:**



- **2.1.i Is This Just For 'Environmental Converts' ?**

WIR is seen, by the users at least, as providing purely commercial gain, i.e. new customers and markets etc. Mutual Credit is about greater control for a business owner over their own credit, available to them through the 'backing' provided by their own surplus goods and services and using that credit creatively. The model also helps business owners circumvent restrictions placed on them; saving on banking costs and reducing the amount of interest-bearing loans needed from commercial banks. MCSs help businesses remain liquid, to consolidate, to protect jobs and to plan for growth. Members of MCSs experience, on average, between 5% and 10% (Paolo Dini 2016) increase in turnover after joining due to the greater number of clients. When prices are cheaper in other regions, the existence of the local MCS allows members to promote themselves as "local", giving an additional selling point that helps these local SMEs and Social Enterprises sell their goods and services.

- **2.1.ii Is This a Way to Dodge Tax?**

No, it is not. Taxes must be paid on all transactions and that part would be paid in pound sterling (Sec.5.4). The financial saving it does offer however, under the Sardex model, is 0% interest which ensures that the system is just as popular regardless of interest rate fluctuation with state currency. If credit isn't interest free, as Greco <sup>33</sup> suggests, you end up replicating the limitations placed on businesses by the conventional banking and money system.

Although in mainstream economics this effect is dubbed 'import substitution' and is not considered positive because it militates against competition, in times of crisis it is a very effective way to protect a vulnerable economy. In normal conditions, on the other hand, it should be seen as a way for a whole *region* to be more competitive and resilient. Once other regions are also enabled with their own circuits, then inter-circuit trade can be supported, for everyone's benefit. It's an example of the advantages of combining competition and collaboration judiciously, to raise the floor for everyone. In the case of circuits located in regions with starkly different levels of economic strength (for example, Sardinia and Veneto, the region of Venice), then the inter-circuit commission fees that are envisaged (commission-free within any one circuit) could be made asymmetrical to help the weaker region. Whereas such a provision goes against the European Treaty (because it goes against the free market), **non-convertible credits are exempt from such regulatory restrictions.**

## • 2.1.iii Do Mutual Credit Systems Last?

Yes, they do. A 100-page document in the 1930's was written by a leading Swiss Banker as to why Mutual Credit won't last. 85 years later the WIR bank has had the last laugh along with the Sardex, now in its tenth year, along with eleven successful Sardex replications on the Italian mainland.

Fig 5, courtesy of Dini/Littera

Sardex Volume (GDP/IPIL Method, not Clearing House Method)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018
B2B	177,000	600,000	1,750,000	6,083,896	11,041,255	16,870,415	25,371,809	30,345,934	331,291,351
B2E				856,866	3,423,911	5,458,391	7,642,846	9,552,705	102,862,121
Total	177,000	600,000	1,750,000	6,939,762	14,465,166	24,328,806	33,214,655	39,898,639	43,335,347
Sardex Users									
	2010	2011	2012	2013	2014	2015	2016	2017	2018
B2B	237	439	750	1362	1939	2478	2463	2804	3235
B2E	0	0	62	276	651	1119	1600	2592	3102
Total	237	439	812	1638	2590	3597	4063	5396	6337

As reported above not only did the WIR succeed during the monetary scarcity of the 1930s but saw continued growth up until the 1990s when it took on new banking services and had to spread its skills set wider. The reasons why other forms of alternative currency succeed in some places and have failed in others is explored in Section 6.1 and 6.2.

## • 2.1.iv It Can't Be That Impactful Surely?

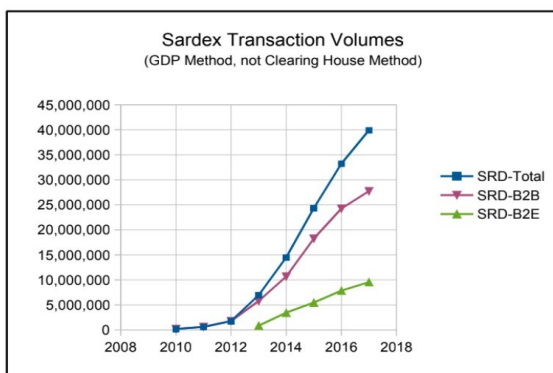
Mutual Credit is the big hitter. Gabriele Littera, CEO of the Sardex, underlines that for Sardinia:

*"There is a recorded transitory volume, today equal to €280 million (Clearing House numbers – See footnote) of turnover and a number of transactions equal to about 700,000. These numbers highlight the historical data for 2010-2018 (April). In our first year alone, the volume was about 300,000 credits and operations 392" (Fig.5 above & Fig.6 opposite)*

If a Welsh Mutual Credit was to grow at the same rate as the Sardex since set up in 2010, through cashless transaction, Welsh SMEs would save £24 million in year four, £52 million in year six and £63million in year seven. (Based on business numbers of Wales being 1.8 times as many and then converted to pound sterling).

Members of the Sardex report an additional 7% in turnover due to membership of the system opening up additional markets . If we add that to the equation, the economic impact is significantly higher (see exec summary).

Fig.12



*"I came away with a pretty good understanding of how they operate and the impression that the Sardex structures, procedures and protocols are closer to optimal than any other trade exchange I've seen. It appears to be a developing Model that is both scalable and replicable"*

- Thomas H Greco , Leading global specialist and author on Mutual Credit systems



## • 2.1.v What About Inflation?

Mutual Credit is always balancing; therefore, inflation is irrelevant. Money doesn't have to be destroyed to keep the value up. Getting to a balance across the Mutual Credit system from month to month is achieved effectively by measures managed by the Sardex structure, using pre-sale 'Community Trade Advisors' (CTAs, see Sardex staff structure 5.3 Fig.12)

## • 2.1.vi Mutual Credit is Just for a Downturn!

In that case the Swiss WIR shouldn't have lasted 5 years let alone 85. The counter cyclical dependency of higher utilisation of WIR during downturn and higher utilisation of Swiss Franc during growth, according to Claudio Gisler at the WIR, 'cannot be proved', despite attempts from outside of the WIR to make this case. Edgar Kampers of Qoin <sup>33</sup> suggests, "With a strong valid proposition, the need for an economic crisis to make a community currency valid is a red herring. In a downturn mutual credit helps trade spare capacity. If the economy is strong, people don't expect as much spare capacity, but it can still be provided and accessed for growth"

## • 2.1.vii Isn't This Isolationism?

No, you do the bulk of activity in sterling (around 90%). It's a complementary currency, it monetises spare capacity, strengthens your sterling account, and makes investment easier. The amount of trading in Mutual Credit typically accounts for an average of 10-15% of turnover.

Those who lead Mutual Credit systems benefit from having neighbouring circuits that can provide access to goods not produced in their own region. With an inter-regional Mutual Credit transaction, let's say with England's West Midlands, money saved would still stay within the sterling accounts of the Welsh SMEs. Co-operation therefore would be the name of the game. There are currently developments gathering pace to establish the 'Credex' Mutual Credit system in the West Midlands in the Summer of 2019.

## • 2.1.viii Why Non-Convertible, Doesn't This Restrict Businesses?

Mutual credit isn't money in the traditional sense: it is backed not by sterling but by the surplus goods and services in a membership of businesses; therefore convertibility is incompatible with a mutual credit system.

Edgar Kampers of Qoin states:

*"making mutual credits convertible leads to bankruptcy of the mutual credit organisation".*

With non-convertible mutual credits, if there's a downturn and national currency is in short supply, members won't be tempted to cash in and convert. This would:

**(a) obviously undermine the MCS**

**(b) wealth would leak out of the region and**

**(c) and liquidity in the members bank accounts would then be under the kind of strains that leads to business collapse in countries where there is no mutual credit option.**

Non-convertibility addresses the main problems of weak economies with a negative trade balance: the medium of exchange cannot migrate to the financial centres to be reinvested in more speculative ventures, it stays anchored to the local real economy.

An additional benefit of non-convertibility is that it renders the system exempt from payment service provider regulation such as PSD II <sup>34</sup>. By making a currency convertible, i.e. the local units being initially bought for sterling, means that whilst it has been ringfenced for local spending, it is sterling nonetheless. Mutual Credit can't be classed as 'money' therefore is exempt from regulations that appertain to 'money'.



## • 3.0 Mechanics of a Mutual Credit System

### • 3.1 Backing:

The Third sector uses time, Governments sometimes use future tax receipts, whereas the Social Economy and SMEs in Sardinia and Italy use Mutual Credit. The products and services that businesses commit to offering as backing for credit is approximately 10%. Products and services that they can recover within 12 months. It's within a set proportion of 'turnover credit' that businesses can exchange the needed products and services between each other: swapping what's needed and freeing up money.

### • 3.2 Credit Limits:

Within member companies there's a recognised credit limit that members can go in debt by, which is usually a Mutual Credit figure pegged to around 2% of the business's currency turnover. Therefore, in Sardex the ratio of backing to debt is  $10/2 = 5/1$ , which is the *inverse* of the 'leverage' of a speculation bubble. For this reason, the Sardex system is very stable and resistant to free-riding.

The principle of setting appropriate, creative and sustainable levels of debt does not need inventing, as Greco points out:

*"there is an abundance of historical experience from which sound monetary principles have already derived. It is only necessary to apply them".*

On setting credit limit, Greco states:

*"avoid inadequate account limits, over issuance of credits in relation to an issuers productivity and the demand for their products and services"*

adding that one of the main reasons for failure is:

*'Lack of clear agreement between issuers and users of credit'*

Sardex have an exemplary system of pre-sale and post-sale operatives; an exemplary model for ensuring that the problems of inappropriate credit levels are avoided and users are gently trained to get the most value out of the system. One of the most interesting aspects of the Sardex system, and of mutual credit in general, is that the incentives of the individual members are aligned with what is best for the circuit.

**It would be the interest of the Welsh Mutual Credit to invest in training and education of the members and staff structure design needs to accommodate this provision**



### • 3.3 The 1000 Rule:

All Sardex transactions of less than 1000 are done using 100% Sardex. Over 1000, transactions can be in both credits and national currency (25%, 50%, 75% and 100% credits). This credits acceptance level is agreed to by the users at contract signature and can be changed when the contract is renewed every year. For mixed currency transactions Sardex won't know what the € portion of the transaction is. That's down to the businesses themselves. An important point about mixed trades is that most of them would not be possible without the credits part. Therefore, the adoption of a mutual credit system leads to a positive increment in national currency GDP.

### • 3.4 Price Pegging:

Goods and services are bought and sold offered at prices that are published and competitive in state currency, euro, sterling, and then 'pegged' by the same number of Mutual Credits. Beyond transparency of costs offered, it also makes the tax (paid in euros) easy to work out.

### • 3.5 Usage behaviour:

Most members use Sardex as intended: i.e. they manage credit accounts that oscillate between positive and negative balances with frequent interactions. There are then members who 'hoard', which is pointless with an MCS as they're not getting the most from a credit system which is interest free. The beauty of the Sardex structure is the ability to identify issues and work with members directly. Then there are a few members who stay in the red. According to a recent (2017) estimate, 30% of the users were always in the black, 20% were always in the red, and 50% were oscillating in the way they are supposed to. Among the users always with positive or negative balances, more than half of each remained active, meaning that their balances oscillated during the year even though they did not cross the x-axis. Therefore, the number of "non-performing loans" in the system is less than 10% of the users. The answer to address these problems, in most cases, is to provide incentives and sanctions which are part of the Sardex design. There have been very few cases where credit recovery companies had to be called in.

### • 3.6 Annual Fee:

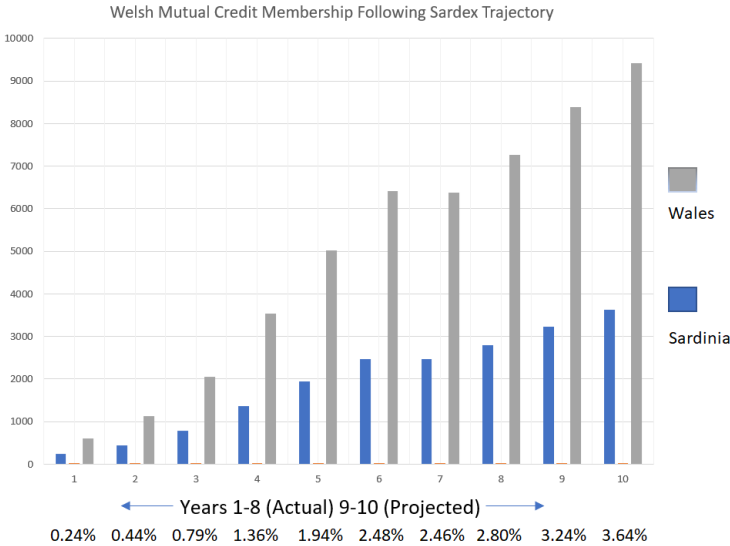
WIR transactions incur a 2% fee in Swiss Francs. Sardex tried a transaction charge but this was unpopular, so they adopted a flat rate annual fee. However, in the early stages of a Welsh Mutual Credit with low numbers and therefore low transactions not justifying an annual flat rate fee where a return of optimum trading can't be guaranteed, a pay as you go transaction fee might be the only option until there are enough numbers.

The Sardex annual membership fee is proportional to the size of the company and the expected volume traded in credits, ranging from 300 Euro for non-profits to 3000 Euros for large companies. The B2C system does involve a 2% fee prepaid in Euro to Sardex S.p.A. (see INTERLACE report D3.1 for more details. Footnote below) .

• **3.7 The Size? Projected Membership for Wales:**

A Welsh Mutual Credit system would have a business membership approaching ten thousand within ten years if the Welsh Mutual Credit followed the same growth trajectory as the Sardex. However, the Sardex has reached its market share with no public subsidy. With Welsh Government support and or involvement of the public sector, the Welsh Mutual Credit could go much further and faster. The graph is based on the actual percentages of the Sardinian SME sector that were Sardex members each year.

Welsh Government and the public sector in Wales could themselves embrace and utilise the Welsh Mutual Credit which would ensure guaranteed local procurement. The public sector workforce, at 9.5%, is higher than the UK average. The public sector, as witnessed with the regional government in the Northern Basque Country who support the Eusko; integrate the currency into their services. Barcelona City Council’s support of the REC as well as Bristol City Councils support for the Bristol Pound here in the UK. If the Welsh Government does wish to support the Welsh Mutual Credit system, it may wish to provide support to enable set up first: monitoring and supporting its growth in the SME sector before committing to direct involvement in the mechanism of the Mutual credit itself.



The percentages along the bottom of the graph represent the % of total Sardinian businesses that were members of the Sardex Mutual Credit at the close of each year start up in 2008. The first eight years are actual percentages with the final two columns being projected based on the trajectory of the first eight.

Ref: The percentages above have been worked out using the B2B (Business to Business) membership figures, courtesy of Dini/Littera, Sardex. Note: the percentage of Sardinian SME joining, was worked out from the yearly membership figures provided by Dini/Littera (Sec. 2.1.iii, Fig.5)

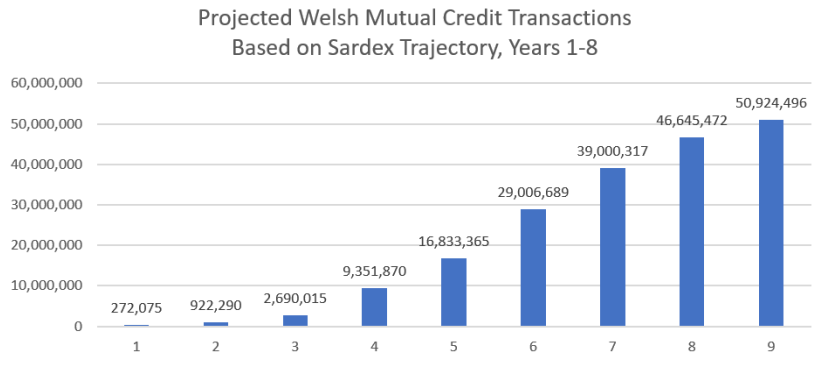
### 3.8 Projected Mutual Credit Transactions:

The collective liquidity of the SME sector in Wales is predicted to rise by the numbers below if Wales adopts and supports a Welsh Mutual Credit system: around £50 million by years 8 to 9. The blue bars therefore represents sterling ‘money saved’ through Business to Business transactions for the goods and services SME’s need to operate.

These additional sterling reserves, there due to Mutual Credit transactions, combined with the predicted increase in turnover for Mutual Credit members averaging 7% in Sardinia, evidenced in Sec.1.3.xii. provides the same cushion for businesses to keep people in their jobs, that has been reported on by the Financial Times, Forbes, Washington Post and other media outlets. The net result is a lifeline to businesses to keep trading, recruit and grow.

This graph shows the rise of Mutual Credit transactions projected for Wales, following the same 8 year trajectory of the Sardex. The yearly transactions (in euros) are evidenced in Sec.2.1.iii Fig.5 (data provided by the Sardex, Dini/Littera). This is then multiplied by 1.8, the size differential between the Sardinian and Welsh SME sector numbers, and then converted to sterling.

Years 1-8 in the graph are based on the actual Sardex trajectory, year 9 shows the trend taking transactions over the £50 million mark.



#### KEY FINDING:

By year 9, the Welsh Mutual Credit will have helped Welsh SME’s cross the £50 million mark: money kept in their accounts due to B2B cashless transaction being an added business tool in Wales. This ensure fewer business closures, increased job security and more scope for investment growth.

The cumulative prediction over a 10 year period will be around £200 million

*NOTE: If we want to look at the economic impact of a Welsh Mutual Credit, we should also consider the 7% average additional turnover that Mutual Credit members enjoy. Explored in Sec1.3.xii*

• **3.9 Projected Income to Sustain the Operation:**

Guiseppe Littera, head of Sardex S.p.A. estimate the numbers of employees and of CTAs (Community Training Assistants) over the years since start-up to be as follows:

Year	Employees	CTAs
1	8	0
2	10	5
3	13	10
4	20	20
5	25	20
6	50	10
7	50	10
8	40	30
9	40	30

Reflecting on the set up of a Welsh Mutual Credit, Paolo Dini suggested:

**“If you are working with Sardex I think that you can probably afford 1/2 of the employees in this list at each stage, and a similar number of CTAs”**

The Welsh employee numbers and staffing costs will be smaller if the Welsh Mutual Credit partners with and uses the Sardex platform: a whole team of developers wouldn't be necessary. The admin team would also be a bit smaller, according to Sardex S.p.A and Paolo Dini as the Sardex in Sardinia have a higher workload providing assistance to the 11 replicated models on mainland Italy.

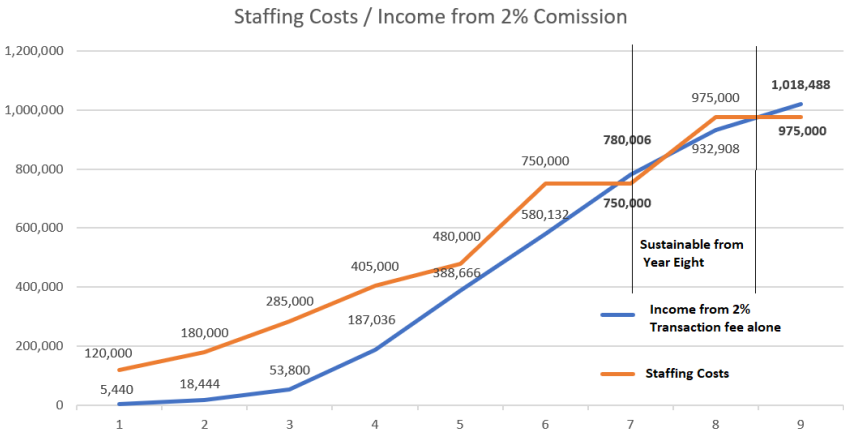
In the predicted staff figures (opposite Fig.) the staff and commission based CTA's have been halved, as per the Sardex's suggestion. However, in the Sardex figures above, years 6 and 7, reflect a period when the management placed a larger emphasis on increasing Sardex transaction volume with zero emphasis upon growing the membership. The staffing structures and skills required for this reflect that time, with staff numbers rising briefly in with CTA's, working on recruitment, falling. Whilst the predicted Welsh staff is half that of Sardex, as per the advice, the annual upward trajectory has been evened out slightly.

Ref: CTAs are commission-based and about 4 or 5 CTAs are actually in the employee column; those that have become full time.

The estimated staff numbers needed for a Welsh Mutual Credit operation therefore, based on the suggestion by Sardex, is as follows:

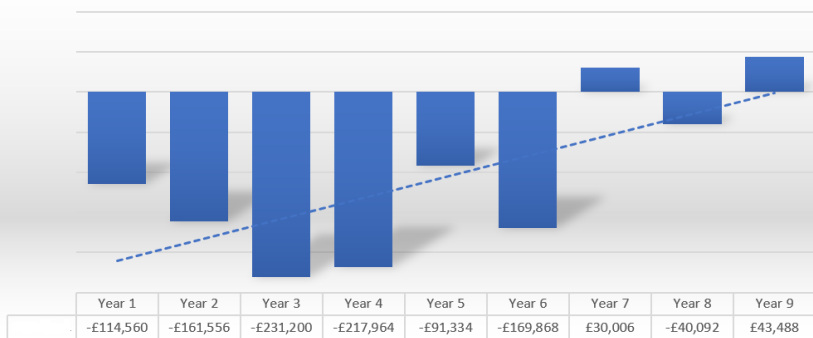
Year	Number of employees needed	CTA's	Estimated staff Costs
1	4	0	£120k
2	5	2	£180k
3	7	5	£285k
4	10	7	£405k
5	12	8	£480k
6	20	10	£750k
7	20	10	£750k
8	25	15	£975k
9	25	15	£975k

When therefore could a Welsh Mutual Credit system become financially sustainable? If the Welsh system enjoyed identical transaction growth (evidenced in Sec.2.1.iii Fig.5, data provided by the Sardex, Dini/Littera) what would a 2% transaction fee in Wales provide in terms of income. Wales has 1.8 times the number of businesses, therefore the figures here have been revised to reflect that and then converted to sterling.



This report predicts that a Welsh Mutual Credit system could cover its staffing costs through a 2% transaction fee (similar to the Swiss WIR Bank Mutual Credit system) within eight years. This roughly ties in with the Sardex experience who are at that point now. (March 2019)

### Staffing Costs Per Year / Cost of Scheme



## 3.10 A Summary of What is Offered to the Welsh Government and the people of Wales:

For an average investment of around £150k a year for staff (excluding rent and marketing budget to be explored by the taskforce) until breakeven point in year 8, the Welsh Government could have the UK's first Mutual Credit System and achieve the following:

1. A business membership of nearly 10,000 SME's across Wales, more should Welsh Government choose to include parts of the public service during later growth stages (evidenced in Sec.3.7)
2. £50 million 'money saved' around year 8 by Welsh SME's, with a minimum of 3.5% of Wales's SME's becoming members or £200 million, cumulative over a ten year period (evidenced in Sec.3.8)
3. An additional turnover figure for Welsh SME's, based on the 7% average in Sardinia, of nearly £130 million in year for year 10 year, £256 cumulative over the ten year period (evidenced in Sec.1.3.xii)
4. A means of safeguarding thousands of Welsh jobs (evidenced in Sec.1.3.ii)
5. A sustainable delivery model by around year 8 (evidenced in Sec.3.9)
6. A membership criteria that provided incremental steps towards transitioning the SME sector to the Circular Economy (Sec.1.3.vi) enabling Wales to tap into the £2billion per annum potential savings cited by the Circular Economy Wales report carried out by the Ellen McArthur Foundation in 2011.

- 8. Reward schemes using Mutual Credit, to advance Wales beyond a global recycling gold position to achieving Zero Waste at an accelerated pace (evidenced in Sec.1.3.v)
- 9. The funding of and re-launch of a sustainably funded 'Environment Wales' with future profits combined with a Business to Consumer offering being launched by the Welsh Mutual Credit during the growth period (evidenced in Sec. 1.3.xi Sec.4.2.iii)
- 10. A means of encouraging simple bilingualism within the business sector across Wales without recourse for legislation (evidenced in section 1.3.x)
- 11. A means of stimulating local supply chains in all corners of Wales (evidenced in Sec.1.3.iii)
- 12. A means for the Welsh Government to target new strategic challenges as they arise by utilising the Welsh Mutual Credit system and channelling new reward schemes around e.g. waste (evidenced in Sec.1.3.v) or new innovation around Universal Basic Income (evidenced Sec.1.3.viii) or indeed any other social or environmental issue Wales should ever face
- 13. A means of stimulating tourism, the arts and leisure (as evidenced in Sec.1.3.x)
- 15. Long term sustainable support for Welsh Social Enterprise (evidenced in Sec.1.3.xi)
- 14. Driving Wales towards a more self-reliant, competent community by developing local manufacturing, local food production through farm diversification and value adding; local market provision and reducing transport miles.
- 15. Encouraging all businesses in Wales to account on a triple bottom line basis so that the real costs, not just the financial costs, are taken into consideration in investment policy.

**See Section 7.0 for the list of Recommendations**



- **Strategic Signposting:**

- ⇒ **Summary of strategic benefits for the Welsh Government to Consider: Section 3.10**
- ⇒ **Alignment of the sighted benefits with key Welsh Legislation, UN SDG's and Mark Drakeford's Leadership Manifesto Proposals etc: Section 1.4**
- ⇒ **Key economic projections: Sections 1.3.xii and 3.8**
- ⇒ **Next Steps and Recommendations: Section 7.0**



## PART 2 of 3:



# Mutual Credit for Wales: **Design & Start Up Considerations**

## 4.0 Design Considerations

### • 4.1 Geographical Spread:

Wales is the ideal size to run a Mutual Credit system.

Within any of the complementary models, either convertible currency or credits for Mutual Credit, there needs to be a reasonable choice of goods and, according to Giuseppe Littera from the Sardex, covering all sectors (Sec.1.3.iii, Fig. 1 & Fig. 2).



Signing up businesses as Welsh Mutual Credit members to be able to complete specific supply chain circles means that interaction is then taken some way from the operation, which implies the need for a wide geographic area. The value and usefulness of a Mutual Credit grows as the size of the network grows. However, the geographical area should not be too large because trust is strengthened by social ties and cultural identity, which are strongest at smaller scales. Therefore, Wales is ideal in both respects, not too small and not too large: it is 'just right'.

Thomas Greco suggests that one of the two major reasons for failure is inadequate scale and scope of the operation. A Welsh Mutual Credit will need to work across the board, hopefully supported by Welsh government, to reach across the sectors and sell the MCS scheme to the whole of Wales:

*"When done correctly on a large enough scale, direct credit clearing is fully able to function as a viable complement to conventional money and banking and sustain itself in the long run" "...it is better to organise exchange alternatives over a wider geographical region as part of a more comprehensive economic development programme"*

An all Wales Mutual Credit system will allow the initiative to avoid differing successes of a multitude of different one-town schemes across Wales. Hay-on-Wye apparently has a town currency, but nobody's heard of it and it's rarely used as there is no organisation, no business plan and no paid team behind it. Small scale work is fine for one hit behavioural change models that move on to fulfil the next agenda need, but for wide scale economic impact, a Mutual Credit system, as presented in Section 4, allows for strategic planning on an all Wales scale. An all Wales structure would be able to target geographic areas, towns or regions of Wales to complete wider supply chain options and/or areas of low business success rates.

Of the common stumbling blocks for new currencies, Greco cites:

**"failure to achieve critical size of the participation base" with "too narrow an assortment of goods and services offered".**

Wales is around double the population, business and GDP size of Sardinia where we know a proven system works. Wales provides ample opportunity to find all parts of the supply chain circles.



## • 4.2.i Business to Business (B2B)

Variations of all complementary currencies visited for this report were built upon a business to business (B2B) service. They also reported that their B2B model accounted for 5-10% of members business transactions. According to Giuseppe Littera at Sardex, it's the 'foundation stone' upon which all other services can be built. Key to the success of Sardex trading is the team of brokers that assist the membership to keep the wealth circulating. The skills set within the Swiss WIR Bank over the last 15 years has concentrated on traditional customer facing banking support.

As it has been recognised within the WIR that mutual credit brokerage knowledge has been lost, there were efforts two years ago to build up a brokerage team to assist in member mutual credit transaction. As this is an ongoing issue sighted by Claudio Gisler and his team, the WIR now looks towards brokerage models in Australia and of course at the Sardex, whose models, as Thomas Greco puts it:

*"are close to optimum".*



**A Welsh Mutual Credit system should run initially as a 'B2B' scheme adding 'B2E' and 'B2C' schemes (Sec 4.2.i, 4.2.ii, 4.2.iii) after consolidation.**

Information: The Sardex has around 4,000 members in Sardinia and has been replicated 11 times on the Italian mainland. The replications vary in size from a few tens of SME members for the Val D'Aosta and Liguria circuits, which set up early in 2019, to about 1000 SMEs in the Lombardy and Marche circuits, which have been going for several years.

## • 4.2.ii Business to Employer (B2E)

When a B2B operation has enough variety of useful goods, particularly from the point of view of consumers, then the system can be broadened allowing employees to use surplus local currency or credit generated by their employers through B2B transactions. This Business to Employee, 'B2E', system works well within the established complementary currencies (Sardex, Eusko, Chimegauer). Notably in the case of the Sardex, fighting off the number of layoffs during the downturn has received international attention. This business to employee project, says Giuseppe Littera of the Sardex:

***"today sees more than 2,300 employees (now 3,000, 2018), collaborators and administrators of the registered companies, participate in the circuit."***

The main benefit of B2E is greater job security. When companies struggle due to economic turbulence and downturn the provision of Sardex helped keep businesses open and jobs safeguarded. However, in non-crisis conditions, the Sardex B2E volume (2018) is a very significant part of the overall Sardex volume. The 3000 B2E members account for approximately 30% of the overall Sardex volume.

The B2E system is highly efficient, since it leads to two transactions for every credit issued or paid: the first transaction is the payment for the labour performed by the employee. The second transaction is for the purchase of goods and services in the circuit by that employee. Therefore, the 30% figure cited is made up of two parts: the first is the salary payments (15% of total Sardex volume), the second is retail purchases by the B2E members (the other 15%). Finally, the government earns tax twice: income tax and VAT tax are both paid in national currency, and they are both transparently (to the tax authority) tracked. An excellent point for HMRC

In economies without a Mutual Credit system, the choice for employers along with employees are:

- (1) the business closes
- (2) the business cuts jobs
- or (3) everyone takes a pay cut

**None of these options are desirable.** When a B2E provision is in place a 4<sup>th</sup> option is available: in circumstances where there is less money in circulation due to a downturn, or other economic effects, employees can opt for a pay cut in national currency but for the shortfall to be made up in Sardex currency. Pegged to the euro, the credits given alongside traditional currency go just as far and can be used to purchase goods of the same value. The only difference is that purchasing behaviour must be changed slightly. In the Sardex B2E, where entire workforces were kept on despite the 2010 crash, the option was proposed within member businesses to employees and voted upon.

Paolo Dini's calculation (from the Sardex database) is that 30% of the volume of Sardex transactions were B2E in 2017 and 2018, after launching the scheme in 2013, three or four years after the initial B2B launch. Whilst a Sardex replication would be quicker than the original start up, Wales is twice Sardinia's size in terms of geography, economy, population and number of businesses so a reasonable lead in time of a couple of years would be needed in order to branch out into a B2E offering.

#### • **4.2.iii Business to Consumer (B2C):**

*"We arrive at the start of 2019 with an extra strength: the conscious and local purchasing power of Sardinian consumers"*

- Laura Fois, Sardex Bisoo Operations

Businesses to Consumer provision, when integrated into a Welsh Mutual Credit, will complete the project. No longer a service solely for SME's, when added during the growth stages, all of the Welsh public will be engaged.

In Autumn 2018, the Bisoo was launched: a 'B2C' consumer led product. This is a big move forward in the Sardex growth plan. In fact, the founders of Sardex from day one stated that one day the long-term goal was to add the public at large. The success of the Sardex brand and reputation has led to the call for Bisoo, mainly from the public.

A million Sardex going through the system in only four months (Forbes January 2019 <sup>35</sup>) is impressive. The new offer, engaging consumers, aims to build stronger cohesion; binding economics and the community.

Participants are given a card and they earn Sardex at 5%-10% of the Euro transaction, a percentage level that is set by the retailer and can be changed at any time (for example, for clothing stores it tends to be lower during sales). Sardex members therefore commit to the reward offering using the Sardex they've earned and then credit them to Sardex Bisoo customer accounts. This is similar to the workings of a store loyalty card except that traditional loyalty points accrue at less than 1% of the amount spent, and the loyalty is to the thousands of local shops in the local economy. With traditional store loyalty cards, collected points can only be spent in that one shop, very often a multinational chain. Bisoo Sardex can be spent anywhere within the local network of 1000 Retailers (1.3.xi, Fig. 4, using 2018 numbers). This number will grow in the coming years as the program is extended to hospitality, restaurants, and catering (HoReCa) companies (500) and other Service-sector companies (1500).

Card holders can spend the credits locally within the circuit and are committed to donate 10% of them to a local social enterprise. After 12 months the credits however will expire, at which point consumers can donate to a Social Enterprise. This ties into the overall approach of Sardex, indeed all the currency schemes visited; the aim to disincentivise hoarding of the complementary currency. It can only help the liquidity of pounds or euros in SME business bank accounts if the complementary currency is active. Finance with purpose, finance that circulates, finance that isn't taken out of circulation and hidden under a mattress. B2C in Sardex has a promising future.

Other currency systems are asking how their B2C could be developed further. Dante, CEO of the Eusko, asks if the currency could be used to access library services, swimming pools or any other public service, as is the case with behavioural change token schemes in various countries including Spice in South Wales.

(See Sec 1.3.xi to see how a percentage contribution of B2C transactions can be given to Social Enterprises in Wales to a value of £150,000 per annum).



## • 4.5 Membership of the System



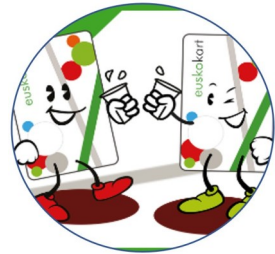
A lower charge in the first year provides an opportunity to test the system and to reduce the risk. This will certainly help a Welsh Mutual Credit system scale up when the verdict will be out as to the systems usefulness. Overall the membership fee needs to be fair, whether in the first year or beyond.

Greco suggests that founders should:

*“Make it easy and inexpensive to join an exchange”.*

It was found during the report that complementary currency organisations who engaged their members at the renewal fee point, engaging in frank and open discussion, witnesses increasing membership levels. Sociologists collaborating with the circuit managers, according to Paolo Dini, could harvest a great deal of valuable empirical feedback during the membership renewal phone-calls as this is the time when the members provide the Mutual Credit scheme with vital data on what they use the credits for, how they interact with and within the system, what works for them and what doesn't, and so forth.

Getting the culture right for a Mutual Credit launch is crucial, getting businesses and people to join because they see it makes sense. At the core of a MCS, a system that works for its members long term is the overriding factor. Financial speculators at one end of the membership spectrum and ideologues at the other isn't helpful for the model.



'Senant', a convertible currency in Brittany, was promoted by City Bank and the Nantes city council. The problem here was a simple one, it couldn't get people involved. Critics cite that the public and commercial events that were used to share information at the beginning of the process lacked the involvement of the business community. Eusko <sup>36</sup>, Chiemgauer <sup>37</sup> and Sardex <sup>38</sup>, systems that have involved people, bottom up, from the very start, have all seen steady growth in their membership.

## • 4.6 Electronic and paper systems

The very best electronic system, through a Sardex replication in Wales, will be brought into force.

There are many examples of paper community money in circulation throughout Europe. From the point of view of Mutual Credit, paper money poses a problem. Members Mutual Credit systems move surplus goods around the network, not touching their sterling bank accounts as much and build liquidity. This can only really be done effectively at an optimum level with an electronic system where everything can be tracked from a central point and where brokers, as with the Sardex, can help and encourage members to make full use of the system in the way it is designed.

Ref: <sup>36</sup> <http://www.euskalmoneta.org/> <sup>37</sup> <https://www.regios.eu/>

<sup>38</sup> <https://www.sardex.net/?lang=en>



Mutual Credit accounts need to move in circles from deficit to credit and back in continuum to be of optimum benefit. A released paper currency has its own life and can't be tracked in any way.



**The Welsh Mutual Credit system should use a fully electronic platform**

Christian Gallieri of the Chiemgauer Local currency, that operates paper and electronic systems advised

***"We started in 2004, if you're starting now, many of the software issues are solved, it is better to go for an entirely electronic system"***

In terms of the standards that this has brought into the community currency sector, Edgar Kampers of Quoin in the Netherlands states

**"Software is now open, providing service on a par to ISO standards for banking. The needs for standards in the sector may have been an issue ten or fifteen years ago, but not now".**

There are a few electronic platforms used by the currency systems visited. 'Linux' and more commonly 'Cyclos'.

Claudio Gisler at the WIR Bank in Switzerland recommends:

***"If starting a new currency, Cyclos provides sufficient capacity".***

Since the WIR developed traditional banking systems and mortgages, it has had to have a multi-use electronic system than can accommodate both WIR credits and the whole host of regulated banking services they offer. The Sardex uses the 'Cyclos' platform and it works well for the 8,000+ B2B members (counting the members of some of the other regional circuits that are also managed by Sardex) it has and would fulfil Wales's needs. The benefits of blockchain systems however are now being considered as the next step by Sardex because the extension to B2E and especially B2C membership would strain Cyclos beyond what it is able to support.

Under the new EU Payments Directive (PSD II) <sup>39</sup>, the REC uses a payment platform that allows their specific business model, a complex one, to operate within the directive. REC is a convertible currency; therefore, it is subject to regulation around electronic payments in a way that Sardex isn't. The payment platform REC uses allows the following complex set of transactions to be done in one transaction without the consumer or the business having to worry about how it works.

1. REC's bank card details are inputted into the app by the REC participant.
2. These transferred Euros (in exchange for the purchased RECs) are reserved for the businesses which are accessed by them when the participant uses RECs at participating stores.
3. The businesses are given an interest free REC loan to invest in their business using local goods and services. They can pay that back by earning RECs from consumers which also releases the reserved Euros.

4. Businesses if they wish can use their loan to purchase renewable energy assets for their business via a REC partnership; which they will gain from financially. Again, the loan can only be paid off to the REC in RECs.

*This: (a) encourages the business to earn RECs and  
(b) drives the investment of renewable energy.*

Through electronic systems all the desires and complexities of the individual business model can be accommodated as in the model used here at the REC in Barcelona.

So, should paper be used at all? Should a local currency model, as opposed to a Mutual Credit, feel it is appropriate to print and circulate the currency as paper notes alongside an electronic system as with the Eusko, then Edgar Kampers of Qoin <sup>40</sup> says

*“as long as a paper money doesn’t look like or is pretending to be pound sterling, then nobody has a problem, the banks don’t care”*

Some purely electronic schemes have designed a note, not for circulation, but purely for marketing purposes: either for the media or artwork on websites and publications. This concession even could be seen to be at odds with Mutual Credit where the circuit will need to build up a membership of businesses who understand that Mutual Credit isn’t money.



(Local currency notes collected by Edgar Kampers of Qoin in the Netherlands)

## • 4.7 Online Markets:

Many alternative currency organisations in Europe produce an online market for members to view and purchase goods by category. Online marketplaces where everything is done via an “app”, where members can advertise and purchase. A Mutual Credit eBay.

Markets are electronic these days although the WIR <sup>41</sup> does still have a physical market. Once it was held quarterly, but it is now scaled back to an annual event. The one event, however, is in heavy demand with 8,000 visitors from all over Switzerland. According to Claudio Gisler of the WIR it’s like a classical trade fair. The annual WIR market is subcontracted where the buying and selling space is managed by the subcontractor. If a Welsh Mutual Credit system were to have brokers, an essential part of the Sardex delivery, they should use such an event to forge in-person relationships with businesses right across Wales. The Royal Welsh Showground would be ideal.

It will be important however for the Welsh Mutual Credit to build up its own stories, from the users themselves, therefore a strong PR team will be needed. As with all forms of complementary currency, money is social. #iosonosardex, ('I am Sardex' video marketing campaign, Sec.5.5) gives a voice to members which is the true story of Sardex. In all the places visited as part of this report, people feel proud of their own region's currency. 'I am Sardex' places their experiences and interactions across Sardinia, with Sardex being the conduit, as a proud identity. Sardinia, like Wales, is a bilingual country, with different dialects and people from other Mediterranean countries and cultures having made their homes there and made a contribution. The Sardex brings everyone together.

## • 4.8 Emerging Blockchain Technology in the Sector:

*"A Shared distributive database that cannot be corrupted by one actor"*

*"A digital highway where all actors on the chain, producers to consumers can interact with trusted information"*

*"A shared Excel sheet, or a ledger, that no one can control, everyone can trust, and everyone can use"*

These are some of the ways different speakers at the UN's first intergovernmental session on alternative currency <sup>43</sup> described blockchain technology to the delegates in October 2018. They are all good ways of describing something quite complex that has received a lot of world media attention. But why should complementary currencies utilise blockchain technology in the future?

Firstly, it makes it possible to simplify processes. For the first time ever, we are presented with simplification and democratisation of the currently complicated, grossly unfair, unequal and now unsustainable distribution process.

Where in Europe is the potential of this new technology being taken seriously?

Malta has passed the first legislation on blockchain in the world. A. Kablan, Director of Maltastock Exchange at the UNCTAD session of alternative currencies <sup>43</sup> said that

*"Since legislation, we're witnessing economic resurgence. Talent is gravitating towards Malta. People and investment are moving to Malta"*

Blockchain must of course be sustainable. Currently the set of all servers hosting the purely-for-profit Bitcoin is using energy equivalent to a country the size of Denmark. The LINUX platform for currencies however is totally sustainable as are many evolving blockchain technologies. Sardex currently uses Cyclos, that can be seen in operation online <sup>44</sup> filmed by the author of this report after interviewing a Sardex business member.

Sardex, operating with its social and environmental credentials, is looking to newer blockchain technologies that act for the environment, with measurable net benefits for SDG's as opposed to being detrimental like the aforementioned "Denmark's energy" example. Sardex coordinated the INTERLACE EU project <sup>45</sup>, which ended in October 2018 and successfully developed a prototype of a permissioned blockchain for business

As Mutual Credit systems grow and consider inter-trading, which Wales could do alongside the Credex development <sup>46</sup> in the West Midlands of England, the 'public' blockchain will be advantageous. B2B transactions within the circuit would be on the private blockchain, providing security permissions and controlled access. For intertrade of 'additional goods' with a neighbouring circuit, the 'public' blockchain system will be able to show that the same exchange rate is being used in both directions, i.e. that circuits aren't making profit from one another.



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"\$130 billion of hidden fees are now the reality for the banking sector and any transaction you do. The potential to reduce that is huge. And #blockchain could be one of the solutions," @EvaKaili, a member of European Parliament @Europarl\_EN, says at #WIF2018.



Sardex is aiming to be a circuit in a family of circuits (see reports D2.3 and D4.2 on the INTERLACE website, footnote on previous page). Therefore, such a system is appealing because it is transparent by design. Intertrade between circuits, to increase business choice over products, would still leave sterling in the businesses accounts of Welsh members as a result of not spending cash, therefore the aim and benefit of Mutual Credit is maintained, enhanced and not undermined

In circuit intertrade, supply chains could be pulled towards SDGs via blockchain technology, an area that a Welsh Mutual Credit could develop following set up with the Sardex as partners. Food safety, fraud, protection of human rights, could all be tracked as the incorruptible imprint of transactions within the ledger of all block participants in the chain can't be changed or corrupted. A Welsh Mutual Credit using the openness of blockchain at some point in the future would offer an exemplar to spread the principle of fair-trade supply chains across the wider economy and beyond Wales's borders.

The Sardex scalability model involves a distributed blockchain-based infrastructure. Wales would be party to this open, public, non-profit infrastructure, a year or two after start up: the initial version would be developed by Sardex. This approach is the result of 4 years of brainstorming on how to reconcile the extremely different requirements covering functional efficiency, governance, investor exit, joint ownership and profit.

Ref: <sup>46</sup> <https://credex.network/>

Sustainable products cost more usually; as the 'Blue Economy'<sup>47</sup> points to, we all tend to pick and mix our buying: organic and pesticide, fair trade and cheap Labour grown food. The costs pile up with verification processes for fair-trade, legal services and intermediaries that certify fair-trade and organic products: all needed because the producer is faceless. It now becomes a commodity to buy sustainable food.



**In Wales the new Mutual Credit system could use blockchain to trailblaze accountability of supply chains, whether that be in terms of food, clothes or any product.**

Offering blockchain across all supply chains, a Mutual Credit exemplar with a Wales-wide reach would enable people in Wales serving our communities to apply the same principle to their work. After giving charitable donation, where does it go? Monitoring government funding could be a thing of the past, monitoring of grant outputs could be a thing of the past. Blockchain can already track the flow of money into charities from donation through to the beneficiary via the Binance Charity Foundation<sup>48</sup> launched: a blockchain based donation system launched at UNCTAD World Investment Forum this October in Geneva. If blockchain is a proven method to track charitable funding, it can be applied across all fields; we are only limited by our imagination.

The hybrid Mutual Credit and National currency loans offered to member businesses in Switzerland through the WIR and in some of the Italian mainland Sardex replications (Sec.1.3.iv), as stated previously, ensure at least 50% funding is spent within the local economy. Backed by a future blockchain platform, as is being explored by Sardex, there would be an opportunity to track where all the loan is spent and how its impact is resonating outward from the initial investment.

## • 5.0 Start Up Needs:

*"Most team members before the founding of Sardex.net had already tried to make a positive impact on Sardinian society through various social, cultural and political projects. Their shared history combined with wilful determination became the foundation of a group effort that, at the same time, was a big leap of faith" – Paolo Dini.*

The initial challenge of a Mutual Credit set up will be to find the common bond: a group of people with a collective aim of improving Welsh life will be needed to lead its formation. This report recommends that a Task Force be created, as set out in the recommendations at the end of the report. The following sub-sections set out some of the initial Start Up challenges for the Task Force.

## • 5.1 Political Support

In many areas of Europe, regional government is playing its part in the set-up of complementary currencies. Currency examples explored in this report fulfil socio-economic goals, regional government goals and strategies as well as the Sustainable Development Goals of the United Nations.

The REC (Real Economic Currency), launched as a pilot in Barcelona in the Autumn of 2018 is EU funded which has added, in the words of its CEO Susana Belmont:



**“legitimacy and acceptance of the scheme across the political divide in the city”**

Of the 80 stories about the REC since in the local media following the launch, none have been negative, 50 have been neutral, and 30 positive. Barcelona City Council also adds weight to the pilot, providing a 20% match along with advocacy; essentially getting more businesses on board with the scheme.

Dante Edme-Sanjurjo, CEO of the Eusko in Bayonne, said:

***“Nobody across the political divide is against what benefits local commerce, both left and right”***

continuing:

***“Local and regional government support the Eusko area. Everyone plays their part”.***

Regional government in the Northern Basque country provided finance to bring stakeholders together to map out the implementation of the Eusko and are now key allies providing advocacy of the scheme with National institutions such as the Bank of France, advocacy and referral on the ground.

There are numerous examples throughout Europe of complementary currency partnerships to ensure local funding of public funds. The Welsh Government, in supporting a Mutual Credit system for Wales, could pave the way for the public sector being a Mutual Credit participant. This would provide the Welsh Government, through a Mutual Credit system, future opportunity to target grants, loans, contracts and procurement where local spending would be guaranteed. It will take many years for public bodies in Wales to fully embrace the need to channel public money to the local level. Welsh Government support and participation in Welsh Mutual Credit allows this desire to be embedded right across Wales in a realistic timeframe



## • 5.2 Start-up finance

This report recommends replication of Sardex in Wales; therefore, the start-up finance overview focuses on the start-up needs of a Mutual Credit system.

Sardex is a slow growth model with long term impact. A large funder would be needed that understands this and can be patient for a return in a 5 to 10-year period if privately funded, or a longer monitoring period if publicly funded. The model provides '**constraint from below**', it can only grow slowly, due to the constraints, which of course is deliberately designed to ensure appropriate growth.

A Welsh Mutual Credit, alongside the Sardex, could seek private finance which will inevitably influence the kind of governance needed. For the set-up of the Sardex, investors brought in €150k initially followed by a further €3 million a couple of years later. There are now seven additional investors on the board sitting alongside the founders. To develop a Sardex franchise beyond Italy, financial investors would be sought within the UK, preferable Wales. A formula would be sought that is agreeable to all involved covering exit strategy, return on investment and growth etc.

Whether a Welsh Mutual Credit is started with public or private investment and whether it uses a using the capped share dividend Community Interest Company model or other, a Welsh Mutual Credit system could cover its own costs within a 6-year timeframe based on Sardex models and experience.

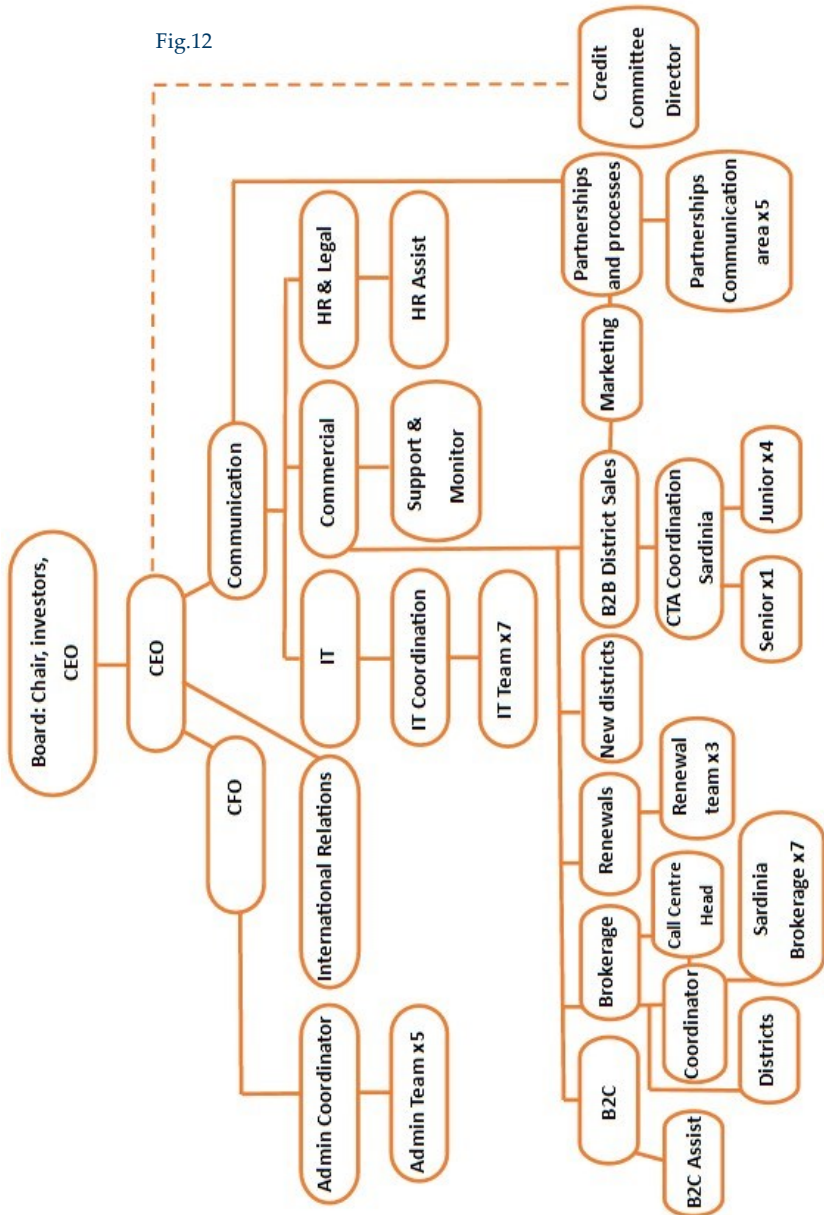
## • 5.3 Staff Structure:

In (Fig.12) opposite, the key to the Sardex success are the pre-sale CTA's (Community Trade Advisors) and the Brokers offering post sale/care.

For an idea regarding the staffing costs for Wales, which would be smaller than the Sardex, due to their involvement in 11 replications of the system throughout Italy, see (Sec.3.9).

Sardex Structure. (Brokerage Model)

Fig.12





## • 5.0 Governance

### 5.1 Sardex, Sardinia:



Without Government financial support in 2010, the Sardex had to choose a standard business model in order to attract investment. As the Sardex looks towards an exit strategy for its investors, it is now exploring future governance models to reflect and embed the social aims that have been present from the very start. With Sardex at a point where it can offer the system internationally, Sardex has been discussing new forms of governance at their conference in November 2018. The most innovative of these being the model used by Bosch, the company who manufactures tools.

The proposals, currently being explored, would create an equilibrium to retain localism and protection of the global framework. Such a structure would consist of three interconnecting companies to protect the growth and core principles from future takeover. In this model, the regional circuits, which are legal entities in themselves, could own 30% of the Sardex international organisation.

Of course, it is important to note here that this is for the longer term. For the time being, the contract with individual members protects the Sardex social purpose and the drive towards involving members is through the marketing, and the 2018 #iosonosardex ‘I am Sardex’ campaign, filming the experiences and stories of members. Transition to a different governance structure for the Sardex will have to wait until there is an exit timetable for investors. The architecture and a possible corporate structure of the future system are briefly discussed in the two reports D2.3 and D4.2 of the EU project INTERLACE that Sardex coordinated.

### 5.2 Possible Governance for a Welsh Mutual Credit System:

Regarding the set-up of a Welsh Mutual Credit system, an asset locked Community Interest Company Model could be used from the start, one with a capped maximum on shareholder dividend. The registrar for Community Interest Companies has model rules available at Companies House.

In the Welsh model there could be an advisory board made up of “founder users” following the launch. Dante Edme-Sanjurjo from the Eusko says that a new currency, which will be novel to Wales, needs “**democratic investment**”, utilising a participative governance as a means of galvanising support and understanding of the new system, making it “**participative, democratic and efficient**”.

Looking at the challenge of balancing social aims with high value investors, Rhian Edwards from the Wales Cooperative Centre offered the following advice: (Feb 19)

*“You will need a share-based model if investors are looking for a clear exit and potentially a return. The CIC limited by shares would offer a hybrid between giving shareholders an opportunity for return and a clear exit yet limiting the distributable profit element fits with the social objectives you’re looking for.*

*You could look at an IPS Co-operative model, but your shareholders wouldn’t get any increase in value on the shares so not sure how this would sit for high value investors”*

That a task force looks at either an IPS Cooperative if publicly funded or CIC with capped share dividend model if external investment is needed, as the vehicle for a Welsh Mutual Credit System.

## • 5.4 Legal and Fiscal Considerations:

### - The Tax Question:

State-issued money remains central to Sardex. Firms in its network may combine Euros and Sardex when making payments; taxes on Sardex transactions must be paid in euros. As the value of Sardex itself is pegged to the euro, working out the amount of tax to be paid in euro is therefore straightforward.

### - The Banking Licence question:

The ‘non-money’ nature of non-convertible MCSs allows organisations to remain within comparatively stable legislative boundaries and exempt from cumbersome regulations. As referred to numerous times in the report, WIR operate under a banking licence as they offer mutual credit and traditional banking service. There are several restrictions that are placed on the WIR Credits system that the Sardex doesn’t have to think about. One such restriction is the ability to talk to members openly and refer to members with surplus credit in order to encourage cyclical mutual credit spending.

Other licences would apply: Electronic transaction licences.

## • 5.5 Marketing:

Building knowledge and acceptance of a Welsh Mutual Credit will be crucial and it will need realistic finance.

From Thomas H Greco <sup>50</sup>, a leading Mutual Credit author to all the systems visited as part of this report, *“everyone says the same, (referring to the myths, covered in sec.4) that marketing is key”*

For the pre-launch phase, an initiative in Wales will need to tell the story of successes from other countries, which is what this report provides. For engagement and launch events there are plenty of exemplar video campaigns that can be shown.

Beyond set up, Claudio Gisler at the WIR <sup>51</sup> says:

*“first you need a large group of people to understand. Once engaged, you need people to emulate the members who utilise the system well. 10% of WIR members make 90% of our WIR turnover”.*

*The challenge, as always, is to throw a spotlight on success.*

The Sardex #isonosardex campaign (I am Sardex) aimed to link real life video stories with people working within SMEs right across the island: involving the marketing team driving around Sardinia, north and south, on a twenty-day journey and of course; using Sardex along the way. A team member worked on the graphics, the photography and video making; all feeding into the media Sardex social media.

The campaign allowed members to again see the huge possibilities of the circuit. The format allowed viewers of the videos to feel as if they were there: the aim therefore being to get away from the clinical way that marketing videos tend to be presented. The twitter campaign showed the video set up with the team and then a resulting posed portrait picture given alongside. The whole campaign put people centre stage, it gave a focus to the people, the vast range of their products across Sardinia as well as their resilience, creativity and solidarity.

### • 5.5.i A Sardex Members Perspective of #isonosardex:

Mutual Credit is about improving people lives. The #isonosardex publicity campaign connected with real lives and real stories across Sardinia An Agri-camping business and renewable energy family firm in Sardinia sells some of its renewable energy products from other businesses and receive Sardex. After the #isonosardex campaign they gained new customers.

The CEO of the business said:

***“I was able to ring people and say I’m a Sardex member, and immediately I would get a better result”, “..we had to buy the raw materials from outside, but now we can look for materials here and complete the supply chain”.***

When people produce local produce, the Sardex helps to market the product as Sardinian in a way that a flag or an emblem can only do to a certain extent. When a business advertises itself as Sardex, it goes beyond ‘buy local’ campaigns, it demonstrates that the business walks the walk.

Marketing for ‘Social Currency’ (behavioural change tokenisation) is different. Qoin produces marketing for different age cohorts, someone who’s just started or perhaps leaving the scheme. Edger Kampers of Qoin in the Netherlands aims to change behaviour using psychological mechanisms via electronic means, gaming techniques and looking deep into intrinsic and extrinsic motivators. Dante CEO of the Eusko takes a different approach with the Eusko’s Local currency model stating:

***“you need to touch the heart to get people to embrace the system en-masse across a large area and sustain it for the future”***

An affinity with the Mutual Credit needs to touch the heart and mind. First and foremost, the MCS will need to be presented as having genuine usefulness to Welsh businesses and the ‘competitive advantage’ that the brokering service offer. Greco says,

*“they must be persuaded that the advantages of adopting it outweigh the risks and disadvantages”.*

The first members making the leap to join need careful targeting. Many social enterprises (Sec.1.3.xi) will, it is believed, lead the way in signing up first.

## • 5.6 Identity and branding:

Wales, its people, communities and local businesses will have all the promises of a strong brand and identity. Giuseppe Littera at the Sardex suggests that for some communities local identity is more important than for others, and that the system should accommodate both the business case and identity. Eusko is strongly rooted in identity, it’s undeniable, but its strength as a workable model making economic sense is the stronger part of the Sardex brand. For the Eusko however, regional identity is used more explicitly, using the Eusko and its Basque brand to help gain an additional foothold in the local market. Of several businesses interviewed in Bayonne, the response of the hive products shop on the river front was quite common:

*“People also use the Eusko because they’re proud of their local traditions. We specialise in the promotion of local beekeeping traditions, therefore participation in Eusko is part of our strategy to gain a foothold in that market”*

With a primary focus on the benefits of the Welsh Mutual Credit system (Sec.1.3) in the business model proposed in this report (Sec.3.0) there would be benefit within a Welsh context of engendering solidarity amongst communities to buy in and support a financial system that belongs to the people of Wales and has been designed with Wales in mind. The Hywel Dda Coin, (pictured) could form part of the subtle artwork within the website, underpinning the inherent history of connectivity, cooperation and the rights of small enterprises. The old Llandoverly Bank’s Black Ox (pictured) is a strong image that appeared on the bank notes it once issued in Wales Utilising this image would provide a recognition of the past and could provide the strength and trust that a currency system universally needs. The two horns could represent the dual nature of the complementary nature of Mutual Credit alongside national currency?







## **PART 3 of 3:**



The Journey for a  
Complementary  
Currency Model to Suit  
Wales's Needs  
**The European Study**

**The motto of the**

WINSTON  
CHURCHILL  
MEMORIAL  
TRUST

**is:**

***“Travel to learn***

***return to inspire”***

**who, together with the**



**supported and funded the author**

**to make these travels possible,**

**with further support from**



Llywodraeth Cymru  
Welsh Government

**to provide models to assist in the drive towards  
a Circular Economy**



## • 6.0 The Main Currency Models

1. The stability of the organisations that run the MC's in Europe
2. The flexibility of the MCS to meet different challenges
3. The adaptability of the MCS to be able to drive specific regional agendas
4. The wider geographic reach that an MCS is suited to cover through supply chains
5. The greater impact of an MCS

There has been a rapid proliferation of various community currency models across the world since the early 1970s.

In this section, we look at the two main alternatives to a Mutual Credit System and why they might not provide solutions to all the challenges set by Wales's suite of legislative milestones around sustainability.

Considerations for a Mutual Credit System are thereafter explored throughout the report, building a design fitting into Wales's specific needs along with drivers to take Wales forward to a Circular Economy of resources, which is of strategic importance to the Welsh Government.

Thomas Greco <sup>51</sup>, the leading authority on these cashless exchange states, describes two sub sectors in alternative exchange;

1. **grassroots/voluntary and**
2. **commercial.**

He states:

**"none of the grassroots alternatives ('social' and 'local' currency systems), with a couple of notable exceptions, has managed to become a significant economic factor".**

This report searches for a system that offers Wales-wide economic impact. As part of the research for this report, the following currency models were visited with interviews being held with the CEOs and users of each model. The insights, descriptions of best practice and pitfalls from this research feed into the recommendations and conclusions put forward.

Listed, the currency types consist of the following 'backing' (Sec.3.1) as follows:

**Mutual Credits (Cashless transactions) → backed by goods and services**

**Local Currencies (Towns, small regions) → backed by national currency**

**Social Currency (Tokenisation schemes) → backed by volunteering & commitments**

A fourth currency type, Crypto Currencies exemplified by Bitcoin, are not part of this report. With their aim of individual wealth creation through speculation, often using unsustainable and high energy data platforms, they sit outside the three currencies listed above in our aim of matching an available currency type to Welsh Government strategic aims. The three clustered currency types in (Fig.13) below, are known collectively as the Community Currency Sector which intends to keep wealth creating within the community.

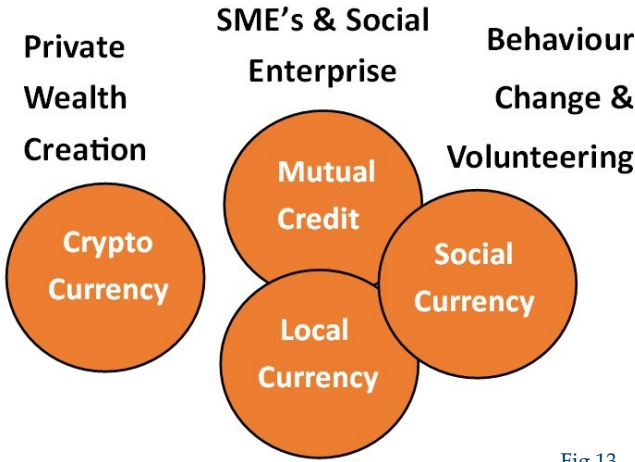


Fig.13

- 6.1 'Social Currency':**  
**(Backed by time and/or behaviour change)**

Organisations developing behavioural change programmes using incentive tokens, exchangeable for local services, do excellent work across Europe. Qoin, a currency in the Netherlands, are specialists in this particular field and there are numerous replicated examples, due to their work, in Dutch cities along with other European pilots initiated by them – the existence of SPICE in Wales (now 'Tempo'<sup>51</sup>) to facilitate this kind of activity is our local example.

This report proposes a currency design to achieve maximum economic impact right across Wales. If that system is to learn from the social currency model, we should be wary of calls to shoehorn behaviour change token schemes into a Mutual Credit system. Several experienced writers caution against this.

Ref: <sup>51</sup> [www.wearetempo.org/](http://www.wearetempo.org/)

Firstly, there is an issue of incompatibility. Rolf Schroeder of the Alternative Currency Study Centre in Lyon <sup>52</sup> argues:

**“the kind of relationships in the various types of community currencies are far from homogenous. Therefore, it is hardly possible to convert time credits into a business-orientated currency, which is based on a 1:1 parity with established capitalist currencies”.**

When Tradequoin in the Netherlands was developed into a business-to-business model it failed. If we want to engage the public via a Mutual Credit system, we can develop an offshoot ‘Business to Consumer’ (B2C) as developed by Sardex in 2018. Redeemable Mutual Credits can be given to consumers as reward points that are spent by the public within the member businesses in a similar way to that of a ‘social currency’ model.

For behaviour tokens to work at the optimum, audience segmentation and targeted marketing is needed. Behaviour change projects by their very nature are task and finish projects. Behaviour change driven by currency has proven to be more cost effective and impactful than traditional marketing campaigns (Lindbergh, Belgium, Sec.1.3.v), because there is an immediate desire to tackle another issue which usually means the co-design of a new token scheme with new partners and decision makers. Perhaps the model doesn't offer the longevity needed for an all-Wales long-term impact. There are numerous incarnations of this model and the Netherlands has a number. ‘SamenDoen’, a social currency model in the Netherlands, like many similar schemes, provide redeemable points per euro spent. Points are awarded for buying sustainable products, for volunteering or for behaviour change achievements such as cycling to work thus reducing congestion etc. Buy products and get points, pay rent on time and get points, etc.

Nu-Spaarpas, an experiment launched in Rotterdam in 2000, came and went. It achieved its behaviour change goals to create incentives for sustainable and eco-friendly behaviour and purchases among its citizens. Consumers were rewarded when they engaged, they bought products that had been identified by the scheme as being sustainably produced. The points people were given could be redeemed for various products and services such as event tickets, public transportation passes, and ‘gifts’ from participating shops, much like SPICE (now Tempo) in Wales.

The Social Currency model is a good model so long as change is expected and can be managed and planned for on a rolling basis so that it's always tackling the most pressing needs. Well-executed Social Currency models are very successful and of course we have provision for this already in Wales.

Large scale behaviour change is inherent within a Mutual Credit system's design, such as helping localise supply chains between businesses and unlocking many economic and social benefits; and there is huge opportunity, at scale, to achieve wide reaching and meaningful social impact (examples explored in Sec.1.3).

The net effect of many of these ‘Social Currency’ schemes is to change purchase behaviour, using commercial loyalty models where businesses are trading discounts. This report proposes a very different system, but the lessons from these systems remain the same. The need for end user benefit is vital along with cross-sector involvement. A Mutual Credit system, by its very design, focuses on SME business benefit across all sectors and supply chains



Qoin in the Netherlands largely specialise in helping co-design ‘social currency’. Such currencies, by design, are shaped in order to fulfil short-term goals and indicators as suggested above. From the stability of Mutual Credit, the delivery organisation could adapt to changing demands without having to redesign the system, geography, branding, marketing and delivery partners; who at each time of set up are at ground zero of currency expertise.

In making an investment case for these kinds of models, the cost savings that arise from the targeted behaviour change need to be demonstrated. The long-term challenge for the model itself is that the model must constantly change in order to be relevant. As markets change and as new behavioural challenges are cited, the delivery model needs re-designing.

## • 6.2 ‘Local Currency’: (Backed by National Currency)

Edgar Kampers of Qoin <sup>53</sup> reflects upon the demise of many Local currency models that have failed:

**“In the case of the Lewes and Totnes Pounds, both marketed themselves as currencies solely for environmental purchases. They should have had a more inclusive and sophisticated approach to engage the non-engaged”**

Edgar continued:

**“Brixton Pound tried to broaden their approach, a currency to increase employment amongst the long-term unemployed. But there was no business model and it maintained itself on volunteer time and subsidies. There was a major design failure in that there was no benefit for the end user. In a situation like this, volunteers dry up and businesses leave. It’s a pity and totally unnecessary”**

By contrast the Eusko in Bayonne is a Local Currency that continues to grow. The Eusko team, when considering its design, went to see the Chiemgauer Local Currency in Bavaria, now in its 16th year. The two systems are broadly similar as a result. These models start with the consumer: i.e. the consumer voluntarily purchases the local currency with national currency.

- Consumer purchases 100 Eusko or Chiemgauer for 100 €
- 3% of the conversion is given to a local NGO of choice
- Businesses wanting to participate in receiving and using the currency in B2B transactions pay an average membership fee of 80-90 € a year based on number of employees

The Bristol Pound, Eusko in the northern Basque country and the Chiemgauer in Bavaria are some of the successful exceptions backed by national currency, offering convertibility back to the national currency. Convertibility is seen, by those who run and advocate those systems, as a desirable tool offering flexibility. In the case of the Eusko, 14% of the currency members in 2018 used this option of conversion. In the Chiemgauer in Bavaria there was a higher 30% conversion back to the Euro within the year. In the next downturn, with money in short supply, the 5% ‘penalty’ for converting back, that both systems use to discourage conversion, might not be enough. So how sustainable is the convertible model over the long term?

Chiemgauer, established in 2004, was set up before the economic downturn. Christian Galleri, CEO of the currency, reported a higher circulation of Chiemgauer at the time of the downturn (people converting to Chiemgauer from Euro) but more being converted back into Euro. Overall a net increase of 5%, with 35% draining out of the system.

The UK example of the Bristol Pound, conforming with UK law, can’t charge for conversion back to the pound, therefore the lack of the 5% charge to encourage people not to change back provides additional vulnerability for a convertible system in the UK.

At just the time when tools to help liquidity is needed, a shrinking complementary currency isn’t desirable. Mutual Credit solves this problem as it’s a non-convertible system. Providing its managed well, the system maintains its integrity come rain or shine.

Typical in all currency systems interviewed for this report, many say it can be a challenge to spend accrued currency from time to time, but there are excellent examples to be found to meet this challenge. 64% business managers using the Eusko (a Local currency model) admit it's sometimes a challenge to spend the accrued Eusko. Members will however make the effort to find goods and services that fulfil their needs by accessing a Eusko directory to find the products and services. Dante, CEO of the Eusko <sup>54</sup> said:

**“They (members) try to avoid the 5% conversion charge as much as possible. The system is moving businesses to change, they understand and accept the constraint. As members, they increase sales due to the additional consumers brought to them through the Eusko brand”**

In Bayonne, where the Eusko is in operation, a Beekeeping Shop offering local hive products sits alongside the river Nive that runs through the town. The Manager there is keen to promote local spending and local supply chains and accepts that currency. For the month of November 2018, he had no need to purchase any additional products and services to run his business, so he part supplemented his wage in Eusko, to spend locally, and left the equivalent in Euros in his business account.

*A Business to Employee service, ‘B2E’ - Sec.4.2.ii) is also offered by the Sardex Mutual Credit System. The Sardex Mutual Credit system backs up its goods directory services with a hands-on help from its staff through brokers.*

At just the time when tools to help liquidity is needed, a shrinking complementary currency isn't desirable. Mutual Credit solves this problem as it's a non-convertible system. Providing its managed well, the system maintains its integrity come rain or shine.

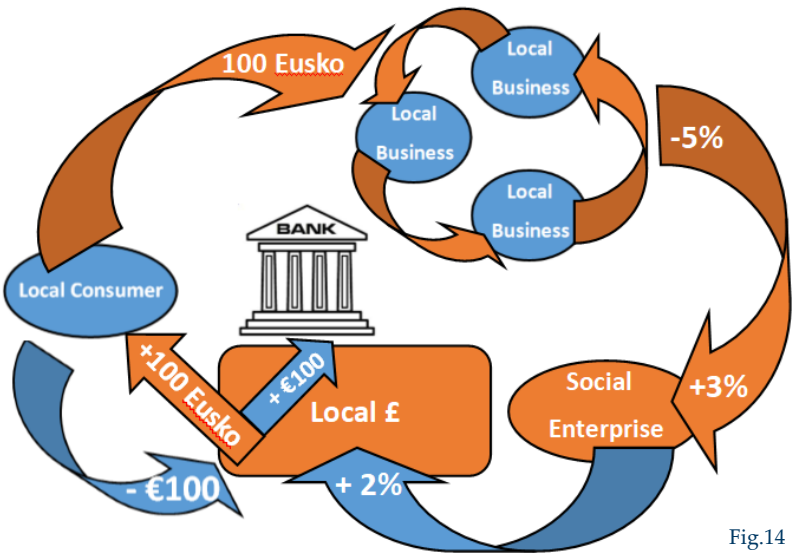


Fig.14

Whilst this report cites Mutual Credit as providing a long-term sustainable model with optimum output, even the convertible models with minimal seepage of the collective wealth, provide changes in business behaviour (2018 figures from the Eusko in Bayonne):

**56% of the Eusko members have chosen at least one new business provider to supplement their supply chain. This represents 732 new business relationships: all local**



In the Social Currency model operated by the Eusko and Chiemgauer (Fig.14) the process begins with the consumer. If €100 is given by the consumer to the Local Currency organisation, those €100 are deposited in a bank (backing) where it remains. Depending on the individual country and national bank, the release of part of this money can be negotiated i.e for low risk investment in renewable infrastructure where returned income can be guaranteed. When the €100 is deposited for backing, 100 Local Currency units are provided to the consumer which is then spent by them among local businesses who are members of the currency and accept them.



**Local Currencies need sufficient numbers of recruited businesses that are both accessible and are of need to the consumer at the time of the currency launch. The currency (in the model above and for the Mutual Credit supply chains in Sec.1.3.iii) can then effectively flow in B2B transactions. Based on the experience of other community currencies in Europe, a Welsh Mutual Credit system should aim to sign up a minimum of 200 members before launching.**

In most Local Currency models there is no commission charge when consumers exchange national currency for local currency. They are provided on par, 1:1, e.g. one euro for one Eusko. The only charge, amongst the local currency models studied, is levelled at businesses if they ever want to convert back; commonly at a rate of 5%. Depending on the business model of course, the 5% conversion penalty in both the Eusko and Chiemgauer examples, is split between the Local Currency operator itself for recirculation and local Social Enterprises.

The REC (Real Economic Currency) pilot in Barcelona, October 2018–October 2019, is also backed by Euro. REC doesn't have to be 100% backed by Euro, it is allowed a 20% room for manoeuvre to consider renewable or other investment products as 'top up' backing (Sec.1.3.viii). RECs converted to Euro, under the provisions of the scheme, can only be channelled into renewable energy investment with additional loan finance matched to make up any shortfall. In Wales, a renewable energy investment scheme, utilising local credit, could be accommodated through a hybrid Sterling loan and Local Credit scheme.

## • 6.3 Lessons from an older Mutual Credit system- WIR Bank (Switzerland):

Many commentators look first to the WIR Bank <sup>55</sup> for inspiration: it has been around since the 1930s and is the world's oldest Mutual Credit system. A large portion of its usage is within the construction industry by contractors whose spending in WIR, usually 50/50 with Swiss Francs, stimulates local building suppliers and contractors in the supply chain – hence the high figures relating to its operation. [Wales take note for housebuilding or other major infrastructure projects]

WIR is undoubtedly a real success story, allowing businesses and their employees to trade goods and services for 85 years. From 1933 until the around 1995 it witnessed continuous growth. Following an expansion into traditional banking services combined with banking regulation, the WIR's staff skill base in the last fifteen years hasn't been focused on servicing WIR mutual credit members; instead relying on an informal network of 'WIR clubs' amongst the membership to maintain the knowledge and techniques of using WIR to the optimum.

*“Working as an ordinary bank means compromises”* – Claudio Gisler

With the growth of Sardex, having been successfully replicated 11 times on the Italian mainland as well as copied by other mutual credit systems in Australia, America and Japan, the WIR is very excited that they now have a family of Mutual Credit systems that they can now learn from. The WIR model however has much to share still when thinking about new Mutual Credit design.

The membership package fee is 150 Swiss Francs a year which provides business members:

- 1000 Swiss Francs worth of membership benefits
- 500 WIR a year to advertise
- A free credit limit of 10,000 WIR
- Free accounts for any employees
- Membership of WIR clubs
- WIR cards etc



WIR clubs’ members are reported as the most satisfied amongst the WIR membership, where knowledge on how to use the WIR effectively is shared between businesses. It is clear therefore that bringing business assistance or brokerage back to the centre of WIR will be of huge benefit. With a 20-year focus on developing tandem banking services, the WIR are now looking at the Sardex’s exemplary structure and operation.

### 6.4 Staff Structures

As 1970’s LETS schemes of peer to peer barter were operated in communities with volunteers, there is an assumption by some that complementary currency models such as Local Currency and Mutual Credit systems are can be run on a volunteer basis.

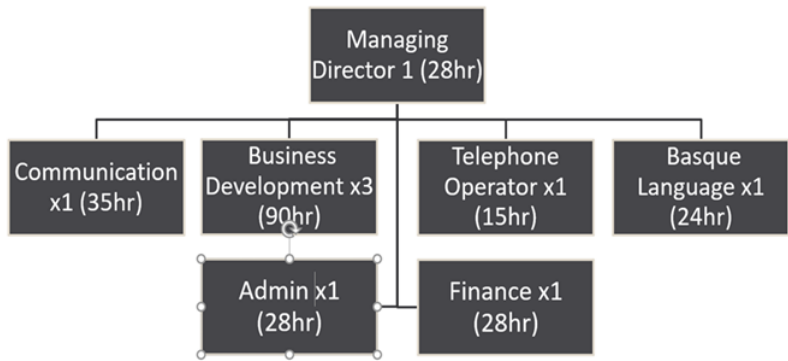
But as Greco points out to anyone wishing to follow this path for a modern complementary system:

*The typical pattern is initial enthusiasm by the organising group and rapid growth in participation followed by volunteer burnout and a slow steady decline in both trading volume and number of participants”*

A sales arm of people with good business and selling skills will be needed to sell the Welsh Mutual Credit to businesses across Wales. A good balance of pre and post sales customer care will also be needed to emulate Sardex’s success.

- **6.4.i Eusko structure:**

With the Eusko (Fig.14), a (local currency model) in its seventh year (2019) it deploys Business Development Managers who work out in the field in the Basque country to meet with businesses to recruit and assist in their use of the Eusko. A telephone operator rings the membership to follow up payments and help with finding suppliers for goods or supply chains. As the Eusko assists members with a French/Basque bilingualism commitment as one of three membership criteria choices (Sec.1.3.x) a Basque language officer is provided on secondment from a partner NGO who delivers that work programme. The above, combined with Manager, Communications, Finance and Admin, the Eusko team is comprised as illustrated below: (Fig.15)



## • 6.4.ii REC structure:

If we look at a Social Currency, the REC <sup>57</sup> in Barcelona had four people plus a volunteer for the early stage of the pilot (October 2018). In addition to this, they employed 6 people on a short-term basis to train 500 participants to be able to use the REC's "app" and pay with it (section 4.6). Now they had this knowledge embedded within the social services team of Barcelona City Council. The REC, still in its year-long pilot, had (November 2018) two economists (one of whom being the CEO), two communication officers, and two sociologists.

## • 6.4.iii WIR Bank structure:

Half of the WIR staff structure are conventional bank customer representatives as WIR operates banking services alongside the WIR Credit system, recruited nine years ago. The fall in WIR Credit members over the last nine years, after steady and continuous growth since 1933, is now being re-addressed. People are now needed, in Claudio Gisler's view, who have run small businesses: e.g. have sold, bought and, most importantly, negotiated on the sale of goods. Negotiation is something banks don't do much. The rates are fixed in Bank products that the customer can either accept or go elsewhere. People are therefore needed within a Mutual Credit system who can help members utilise mutual credit trading to the optimum to the benefit of their businesses.

*"Only reading a textbook on SMEs isn't necessarily sufficient"*

*– Claudio Gisler – WIR Bank*

In providing traditional banking services in parallel, regulators insist on banking experience within the staff structure. Over the last nine years the WIR has relied on WIR clubs, informal networks set up in individual districts to enable WIR members to trade informally. The recent decline in membership however would suggest that the WIR clubs should be an addition to staff structure when orchestrating the Mutual Credit system. The WIR are now looking at Australian models as well as the Sardex's brokerage staff model.

## • 6.4.iv Brokerage System needed:

Brokers can't reach everyone as much as members would like, therefore an element of automation may be brought in at some point in the future i.e. the functional aspects of the platform allowing algorithms that feed back to users. This can give an analysis on some forms of data; tacit knowledge being held by the Brokers. Through constant analysis it is possible to cite where the instabilities are in the credit trading system and where the Mutual Credit organisation should intervene, thus informing the pre-sales people where to focus effort for the health of the system and to enlarge it.

WIR members who are in the 'WIR clubs', where knowledge is mutually shared between peers, are reported as being far more satisfied as customers. Claudio Gisler at the WIR, recognises that not enough is done from the centre to educate businesses leaders to make the most of WIR. The WIR are now looking towards Australian and Sardex style pre and post-sale brokerages to realign the centre of operation with members' needs.

## • 6.5 Governance of Different Models:

### • 6.5.i The Eusko, Bayonne

The Eusko's governance has been built from the start as a cooperative. Users, says Dante, must have control of the currency. For the Swiss WIR Mutual Credit set up in the 1930s, it's always been a Cooperative structure.

The Eusko's governing structure has an electoral college as follows:

- The member businesses,
- The partner NGOs that provide support for members to adopt membership criteria conditions,
- Local Government,
- The people who run the Eusko.

The board consists of representatives from each group.

### • 6.5 ii The Barcelona REC

The Barcelona REC is run by NOVACT, a social enterprise in Barcelona who advanced the scheme and won the initial EU and local government support. After the pilot period (Oct 18-Oct 19) NOVACT will create a vehicle, probably a Cooperative according to Susana Belmont, to run the REC. A similar approach could be taken in Wales, with the organisation responsible for advancing and proposing a Welsh Mutual Credit, being funded to include MCS development as part of its work programme.

### • 6.5.iii WIR in Switzerland

The WIR Bank is a Cooperative with member shares like the UK's 'Community Shares', non-exchangeable with one vote per shareholder. One tenth of total shares can be traded to earn the bank income.

Having developed traditional banking services to offer a financial growth package of WIR Credit and €Euro, there is now less manoeuvrability for members vote on everything as banking systems have brought strict regulations with them.

### • 6.5.iv Chiemgauer in Bavaria

Chiemgauer in Bavaria using a cooperative model issued 'Community Shares', an appropriate investment model for a 'local currency' that would struggle to reach the kind of financial backing needed for a Mutual Credit system structure (Sec.5.3, Fig12).

*Note: as the Sardex Mutual Credit is being recommended in this report for a Welsh replication, its governance is explored separately in the governance options for Wales in(Sec.5.1)*



# Recommendations & References

## • 7.0 Summary of Recommendations:

### - 7.0.i First Steps for the Welsh Government:

-  1. With the strategic benefits and costs set out in Sec.3.10, the Welsh Government considers supporting and funding the start up a new Mutual Credit system for Wales as described in Part 1 of the report, by first setting up a Mutual Credit Taskforce chaired by Circular Economy Wales CIC utilising the set up tool kit in Sec.2 of this report
-  2. That the Welsh Government, in supporting a Mutual Credit system for Wales, paves the way for the public sector being a Mutual Credit participant. This would provide the Welsh Government opportunity to work alongside the Welsh Mutual Credit, using it as a vehicle to tackle Welsh needs as they arise as well as future opportunity to target grants, loans, contracts and procurement where local spending always would be guaranteed. Strategically focused localised spending.
-  3. That the Sardex be contracted by Circular Economy Wales CIC, works with the task force on the further design and replication of the Sardex model in Wales.
-  4. That the Welsh Mutual Credit taskforce be set up consisting of:
  - **Welsh Government – (First Minister or Finance Minister as Chair)**
  - **Eifion Williams – Report author and CEO of Circular Economy Wales**
  - **Representation from Trinity College, INSPIRE**
  - **Paolo Dini LSE, UH – International Consultant with the Sardex**
  - **Rhian Edwards – Supply Chain Specialist, Wales Cooperative Centre**
  - **Representation from the Future Generations Commissioner Office**
  - **Representation from the Federation of Small Businesses Cymru**
-  6. That the First Minister informs the taskforce, which of the strategic benefits in presented in brief in Sec.3.10 he feels is of immediate priority in order that the Mutual Credit can be designed accordingly
-  7. That the Welsh Government jointly runs an information day, with a Ministerial Keynote, where the of heads of Welsh SME's can ask questions from the scheme's staff and partners and be encouraged to provisionally sign up to the scheme before launching

## - 7.0.ii Recommendations for Wales's Taskforce:



1. That the Mutual Currency system proposed covers the whole of Wales (Sec. 4.1)



2. That membership of the Welsh Mutual Credit includes commitment, in annual incremental steps, towards Circular Economy Practices and an undertaking to work with partners to this end (Sec.1.3.vi)



3. That the Welsh Mutual Credit be run initially as a Business to Business scheme 'B2B' (Sec.4.2.i) with online market and consolidate before adding a Business to Employee 'B2E' scheme (Sec.4.2.ii) and a Business to Consumer scheme 'B2C' (Sec.4.2.iii)



4. That the task force sets up a delivery vehicle looking at either an IPS Cooperative if the Welsh Mutual Credit is publicly funded or a CIC Ltd by capped share dividend if private investors are needed or desired (Sec 5.3)



5. That the Welsh Mutual Credit system should be put into operation once it has recruited more than 200 members



6. That the Welsh Mutual Credit considers additional credit for businesses committing to triple bottom line accounting (Sec.1.3.iv)



7. That the Welsh Mutual Credit and the taskforce partners arrange introductory events to help Welsh SME's familiarise with the Mutual Credit system

## - 7.0.ii Recommendations for the Launched Welsh Mutual Credit (IPS or CIC):



1. For a Mutual Credit/Pound Sterling joint loan to be explored and designed alongside Wales's future Community Bank (Sec.1.3.iv)



2. That the new Welsh Mutual Credit should consider the results of the Barcelona Universal Basic Income pilot when published in October of 2019 and if feasible, incorporate into the Welsh work programme (Sec.1.3.viii)



3. That a Zero Waste Household Credit Scheme be rolled out, saving Welsh local authorities between £4,428,000 and £14,760,000 and a year and contributing between a 3% and 10% addition to the already world-beating Welsh recycling figures (Sec.1.3.v)



4. That a Welsh Mutual Credit B2C (Business to Consumer Sec.4.2.iii) offering be launched with a percentage of rewarded loyalty credits being donated to Welsh Social Enterprises or a Sustainable Grant scheme along the lines of the old 'Environment Wales' grants and development partnership



5. That the new Welsh Mutual Credit explores blockchain, with the Sardex, to trailblaze accountability of supply chains, whether that be in terms of food, clothes or any product (Sec.4.8)



6. That Welsh Mutual Credits be offered in an amnesty scheme to unlock an estimated £202.5 million worth of reuse materials from attics, sheds and spare rooms for the Welsh community reuse sector to prepare for reuse and sale (Sec.1.3.xiii)



7. That the Welsh Mutual Credit system provides a stimulus to Welsh tourism by ensuring that Heritage organisations are signed up to the scheme based on the advantages identified in Sardinia (Sec.1.3.ix)



8. That a Welsh Mutual Credit system provides an incentive scheme within its B2B system to provide basic bilingualism, as a business tool, within the private sector without the need for legislation (Sec.1.3.x)



## • 8. References:

Over and above interviews carried out across Europe (November 2018 to January 2019) with the heads of organisations quoted throughout the report, there are also references to the following essays, articles, enquiries and reports in the footnotes. Here's a summary:

- \* EU INTERLACE Project 2018 - <https://www.interlaceproject.eu/>
- \* EU Payment Services Directive, 2015-2366 [https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366\\_en](https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366_en)
- \* Wales and the Circular Economy, Ellen Mcarthy, 2011, [http://www.wrap.org.uk/sites/files/wrap/Wales\\_and\\_the\\_Circular\\_Economy\\_Final\\_Report.pdf](http://www.wrap.org.uk/sites/files/wrap/Wales_and_the_Circular_Economy_Final_Report.pdf)



- \* Littera/Dini - Merging Economic Benefits with Social Values in Sardex — LSE 2014, [http://eprints.lse.ac.uk/59406/1\\_\\_lse.ac.uk\\_storage\\_LIBRARY\\_Secondary\\_libfile\\_shared\\_repository\\_Content\\_Dini%2C%20P\\_From%20idea%20to%20scalable%20model\\_Dini\\_From%20idea%20to%20scalable%20model\\_2014.pdf](http://eprints.lse.ac.uk/59406/1__lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_Dini%2C%20P_From%20idea%20to%20scalable%20model_Dini_From%20idea%20to%20scalable%20model_2014.pdf)
- \* Maria Rita Corda - The 'Made in Sardinia' Virtual Currency Wants to Become Big — Forbes Magazine— 2019
- \* Financial Times article on the Sardex, 2015: <https://www.ft.com/content/cf875d9a-5be6-11e5-a28b-50226830d644>
- \* Thomas Greco, The Beginning of Civilisation, Floris Books 2010
- \* Forbes 2019 article <https://forbes.it/2018/12/11/sardex-sardegna-moneta-virtuale-fintech/>
- \* UN First Intergovernmental session on complementary currency [www.b4sd.net/](http://www.b4sd.net/)
- \* Rolf Schroeder – Boundaries as Constitutive Elements of Community Currencies — Swinburne University, Australia 2017: <https://www.rolf-f-h-schroeder.de/english/>
- \* Centre for Cities, Brexit Economic impact in Wales [www.centreforcities.org](http://www.centreforcities.org)
- \* An Equa Exit, regional comparison of Brexit impact, Institute for Public Policy Research [www.ippr.org/research/publications/an-equal-exit](http://www.ippr.org/research/publications/an-equal-exit)
- \* Demos Report [www.demos.co.uk/wp-content/](http://www.demos.co.uk/wp-content/)
- \* UN Sustainable Development Goals <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- \* BMINCOME, Barcelona scheme that backs up minimum income scheme run by REC: [www.uia-initiative.eu/en/uia-cities/barcelona](http://www.uia-initiative.eu/en/uia-cities/barcelona)
- \* Basel accords, <https://www.bankingsupervision.europa.eu/press/speeches/date/2018/html/ssm.sp180706.en.html>
- \* Payment Services Directive 2015: [https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366\\_en](https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366_en)
- \* Sardex Bisoo, Business to Consumer card article: <https://sardex.net/sardex-bisoo-1-milione-di-euro-spesa-locale/>
- \* The Blue Economy: <https://www.theblueeconomy.org/>

