



Response Document

by the

Malta Information Technology Law Association

to the Consultation Document

'Malta a Leader in DLT Regulation'

March 2018

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1. About MITLA

The Malta IT Law Association was set up in 2014 and presently counts more than 200 members most of which are C-suite executive which hail from the legal, professional and technical streams. MITLA is registered as a Voluntary Organisation (VO/1166) in terms of Article 3 of the Voluntary Organisations Act 2007 (Act No, XXII of 2007), Malta.

As per its statute, MITLA has the following objectives:

- Promote the advancement and development of information technology law, including but not solely limited to computer law, internet law, electronic communications law, information law, electronic commerce law, remote gaming law and cybercrime, (hereinafter referred to as “ICT Law”) in Malta and the advancement of Malta as an international centre of excellence in ICT Law;
- Actively research, discuss and circulate information on legal developments taking place on the international plane and within the European Union with respect to ICT Law and the knowledge economy;
- Promote with international and regional organisations or associations and other national government and non-government bodies legislative and regulatory changes related to ICT Law and to consider together with these entities proposals for legislative interventions having the same aim;
- Afford opportunities for the discussion and consideration of matters of interest to members of the Association and to undertake or assist in the preparation of legal instruments and papers in respect of such matters; and
- Collect and circulate statistical and other information of interest to the members of the Association and to form a collection of publications and documents accessible to the members of the Association.

Visit <http://www.mitla.org.mt> for more information.

2. Getting regulation right

Introduction and Scope of this Document

Reference is made to the Consultation Document entitled 'Malta a Leader in DLT Regulation' published by the Parliamentary Secretariat for Financial Services, Digital Economy and Innovation within the Office of the Prime Minister, on the 16th February 2018 (hereinafter referred to as the '**Consultation Document**') regarding the establishment of the Malta Digital Innovation Authority ('**MDIA**'), the Framework for the Certification of Distributed Ledger Technology Platforms and Related Service Providers and a Virtual Currency Act.

By means of this Response Document, the Malta Information Technology Law Association (MITLA) is pleased to put forward its comments in relation to the Consultation Document.

Generally, MITLA views the Consultation Document and the attempts to place Malta in the lead of the adoption and recognition of DLT and related technologies and applications as laudable as this presents an opportunity to ensure that sustainable innovation is at the core of Malta's vision.

However careful attention must be paid not to over-regulate the foundational technological architecture that is still relatively embryonic. Doing so would risk jeopardising or stifling the effects and/or impact that such technologies may bring as well as related inbound investment in the area.

The ability to of the law to regulate (if at all) technological innovation is a very delicate subject and should be based on a clear understanding of technological neutrality in law, amongst others.

Blockchain needs the law to flourish and grow but challenges exist in applying current hierarchical regulatory models to a decentralised technology architecture. Any Maltese approach venturing into regulating blockchain should be cognizant that, similar to the Internet, such technological regulation needs to appreciate the international dimension in which it exists as this would ensure that any Maltese initiative would end up creating a national silo which would counter the benefits that early-adoption can bring.

Most importantly, Malta has to factor into the European equation of regulating the blockchain especially in light of the recent announcements made by the European Commission, including governance (as opposed to strict top-down regulation), the forging of common blockchain technology standards, the proposed fintech regulation action plan and others.¹

The scope of this Response Document is not to explore economic or social impacts of DLT but will be limited to matters and concepts of a legal nature and thus aligned to MITLA's own objectives to comment on IT Law.

MITLA will remain available and eager to engage in discussions with the authorities and relevant stakeholders regarding the high-level conceptual comments provided herein.

MITLA, March 2018

¹ Communication from the Commission to the European Parliament, The Council, the European Central Bank, The European Economic and Social Committee and the Committee of the Regions on *FinTech Action Plan: For a more competitive and innovative European financial sector*, COM(2018) 109/2 https://ec.europa.eu/info/sites/info/files/180308-action-plan-fintech_en.pdf

3. Structure of the Response Document

As much as practicable, the structure of the Response Document will follow the same structure of the Consultation Document in an attempt to comment upon all the relevant sections found therein. Focus however has been placed on explaining the 8 high-level comments/suggestions which have been summarised below and the headings used in this Response Document revolve around such high-level comments/suggestions.

This Response Document also includes a Select Reading section, collating some of the most salient published documents which have been considered relevant from a academic perspective to the context under consideration. MITLA would strongly recommend that the publications in the Select Reading section are referred to and analysed closely as they underpin MITLA's response. In this sense, the documents referred to in the Select Reading Section should be considered as part of MITLA's response.

Published academic works in the field of blockchain and law are currently limited. A book about Blockchain and Law will only be published by Harvard University Press in April.² Having said that, valuable guidance can be sought through reference of important published works of legal experts in this field including Dr. Primavera de Filippi³, Professor Aaron Wright,⁴ Dr. Michele Finck,⁵ Max Raskin,⁶ Professor Kevin D. Werbach⁷, Julie Maupin⁸ and others.

Unless otherwise noted, acronyms contained in the Response Document will have the same meaning as those contained in the Consultation Document.

² DE FILIPPI P. & WRIGHT A., *Blockchain and the Law: The Rule of Code*, Harvard University Press, (to be published in April 2018) <http://www.hup.harvard.edu/catalog.php?isbn=9780674976429>

³ Permanent researcher at the CERSA/CNRS/Université Paris II Panthéon-Assas and a faculty associate at the Berkman Klein Center for Internet & Society at Harvard Law School.

⁴ Associate Clinical Professor of Law and Director of the Blockchain Project at Benjamin N. Cardozo School of Law at Yeshiva University.

⁵ Senior Research Fellow at Max Planck Institute For Innovation and Competition, Munich.

⁶ Research Fellow at New York University School of Law

⁷ Associate Professor, University of Pennsylvania, The Wharton School.

⁸ Senior Research Fellow at Max Planck Institute For Comparative Public Law and International Law, Munich.

4. Summary of salient recommendations arising from MITLA's Response Document

The below represents the key recommendations being put forward within this document:

1. Resist temptation to set up overly complex hierarchal authorities. Favour polycentric as opposed to traditional regulation. In general terms: governance principles are more desirable than regulatory burdens.
2. Ensure active participation in EU and international standardisation efforts including the EU Blockchain Observatory and ISO, amongst others.
3. Focus on Offchain Equivalence, implementation of practical vertical use cases as opposed to technology/architecture regulation.
4. Implement 'Recycle Box' legislative exercises. Apply ex post not ex ante regimes.
5. Provide a predictable, minimalist, consistent, and simple legal environment and revise the applicability of current rules to enhance legal certainty.
6. Drive blockchain adoption through sandboxing and public sector applications as well as incentives. Increase national R&D efforts and foster incubation of ideas and acceleration of start-ups in this sector.
7. Promote, even through minor legislative interventions, the adoption of Hybrid Smart Contracts with a possibility of Government leading by example with immediate effect.
8. Restrict discussions on legal personality (if at all) to decentralised autonomous organisations.

5. MITLA's Recommendations:

Proposed Legislative Developments

From the outset, whilst the regulation of ICOs and VCs is a reality that will soon be visible not only in Malta but also at a European and trans-Atlantic level, more careful consideration is required with respect to a regulatory approach targeting the underlying architecture as well as the most immediately visible applications of blockchain technologies including smart contracts. In fact, even the EU Fintech Action plan underlines the stark distinction that exists between the block chain and underlying crypto assets and that two should not be considered and regulated as if they are interchangeable terms.⁹

The Importance of Offchain Equivalence

MITLA believes that the most important principle which should be considered in view of any proposed legislative development is the concept of **Offchain Equivalence**.¹⁰

Simply put, Offchain Equivalence should not look at technology or architecture but at the industry/sectoral application of that technology.

The eventual regulatory tightening of VCs and ICOs is a reflection of the application of Offchain Equivalence where the regulatory target is not the technology or architecture *per se* but its application in specific contexts. In this sense, the fact is that there is a growing consensus between regulators that VCs, ICOs and the related ecosystem including exchanges should be closely regarded as an evolution of the financial market. The current discussions,¹¹ developments, the various warnings¹² regarding ICO risks and limited jurisprudence (which nevertheless is already somehow pointing towards the recognition of at least certain cryptocurrencies as commodities¹³) is also a reflection of this Offchain Equivalence principle.

It will only be a matter of time therefore that traditional laws applicable to such financial services will catch up with VCs, ICOs and related service providers, and this consideration is in fact one of the main drivers behind the EU Fintech Action Plan.¹⁴

⁹ Communication from the Commission COM(2018) 109/2, op. cit. Even the terms 'blockchain and 'DLT' and directly interchangeable but for the purposes of this Response Document 'blockchain' and 'DLTs' shall be used interchangeably.

¹⁰ Not to be misconstrued as the legal issues surrounding 'off-chain assets' on the blockchain but merely as a reconsideration of the principle of technology neutrality in law when applied to the decentralised blockchain revolution or, as proposed by the World Economic Forum, as the "oversight of applications whose off-chain equivalents are regulated". See WORLD ECONOMIC FORUM, *Realizing the Potential of Blockchain, A Multi-stakeholder Approach to the Stewardship of Blockchain and Cryptocurrencies*, White Paper, (June 2017), available at: http://www3.weforum.org/docs/WEF_Realizing_Potential_Blockchain.pdf

¹¹ See proposals for discussion on cryptocurrencies at G20 in March <https://www.ft.com/content/0f5b68d8-02b3-11e8-9650-9c0ad2d7c5b5>

¹² See for example the various ICO Risk warnings issued by the German Financial Supervisory Authority (BaFin), ESMA, Austrian Government as well as those issued by SEC during the past months. See also latest ESAS warning at <https://www.esma.europa.eu/press-news/esma-news/esas-warn-consumers-risks-in-buying-virtual-currencies>

¹³ See Judgment in New York delivered March 6th 2018, recognising cryptos as commodities. <https://cointelegraph.com/news/new-york-federal-judge-rules-that-cftc-can-regulate-cryptocurrencies-as-commodities>

¹⁴ "Further analysis is necessary to assess the extent to which the legal framework for financial services is technology neutral and able to accommodate FinTech innovation, or whether it needs to be adapted to this end." See Page 10 Communication from the Commission COM(2018) 109/2, op. cit.

The eventual and necessary regulation of ICOs and VCs can thus be termed as the least controversial proposal contained in the Consultation Document. On this specific matter, MITLA believes that the regulation of VCs and ICOs is inevitable. The same cannot be said however when it comes to any separate regulatory attempt towards distributed ledger technologies as it appears that the Consultation Document is in fact proposing regulation at such level, as opposed to a mere application of Offchain Equivalence, especially when applied to matters regarding ICOs, VCs and the related service ecosystem. In this regard we feel that there is some degree of conflation in terms of the legislative intent.

The application of Offchain Equivalence principles could also be seen in the introduction of the Malta Remote Gaming Regulations¹⁵ in the early 2000's where the focus was to regulate an emerging industry, or more specifically the shifting of the traditional brick and mortar gambling and betting industry to the Internet. The focus then was not on the technology or architecture adopted (or even regulating the underlying architecture that is the Internet) but to ensure that the provision of gaming related activities over the Internet was subject to the same level of protection and regulatory certainty when compared to brick and mortar operations and ensuring equivalence between the provision of gaming activities both offline and online.

Unfortunately, using Malta's success in remote gaming as an example and workable precedent on how Malta can regulate DLT and blockchain is misguided. Furthermore, when Malta ventured into regulating online gaming, the first mover advantage could be measured in years, especially since at the time neither the European Union nor the other Member States had put the regulation of online gaming high on their agenda and this enabled the industry to find its roots in Malta and flourish. The regulation of DLTs and VCs by Malta does not enjoy such time advantages as it is clear that, regulatory challenges introduced by DLT, but more specifically VCs and ICOs is now high on the agenda not only of our direct nation competitors but also of supra national and international organisations including the EU, the World Economic Forum, UNCITRAL and others.

One has to further note that whilst the eventual regulation of VCs and ICOs is a matter of time, and this based mostly on the application of Offchain Equivalence principles, the same cannot be said with respect to the regulation *in vacuo* of Distributed Ledger Technology Platforms and Related Service Providers, especially as defined in the Consultation Document.

Regulatory Restraint during the blockchain incubation period

The Internet had a long incubation period spanning decades. The reality is that the blockchain is evolving in much more rapid fashion. Premature regulation of the blockchain architecture (as opposed to the regulation of licensable activities making use of the architecture) would therefore be generally not recommended.

As echoed by the World Economic Forum:

"In the early days of the internet, governments demonstrated both restraint and foresight. They showed restraint by limiting regulation and control throughout the internet's evolution

¹⁵ Remote Gaming Regulations, S.L. 438.04, Laws of Malta

and they showed foresight by allowing the system to flourish before trying to impose rules and regulations".¹⁶

Whilst, from a technology perspective, the internet and the blockchain are two distinct things, many lessons can be nonetheless learnt from how the Internet became to be regulated. The concept of Lex Informatica,¹⁷ comprising laws and standards regulating the Internet evolved slowly and not through a national effort but an international consensus driven more on standards as opposed to hard law. The blockchain is once again placing legislators at a loss as to what the correct approach should be, especially when one considers the decentralized nature of such technology.

Surely, MITLA is by no means advocating that one should apply the 'Law of the Horse' argument as postulated by Easterbrook¹⁸ to the blockchain, or in any way conclude that current laws are sufficient to tackle all the challenges introduced by the blockchain. The evolution of specific rules relating to the blockchain should, MITLA believes, follow the same path that led to the establishment of Lex Informatica, as an evolution of Lex Mercatoria, where legislative developments took a minimalist approach through a re-understanding of traditional legal concepts and their application to the blockchain.¹⁹

Wright and De Filippi argue that Lex Informatica should be viewed as a natural extension of Lex Mercatoria, a complementary toolkit for the regulation of online transactions through the establishment of technical norms, in addition to contractual rules. *"Just like Lex Mercatoria, Lex Informatica ultimately relies on self-regulation: it is a system of customary rules (or standards) and technical norms elaborated by online users for internal use by community members. The system operates transnationally, across borders, independent of national boundaries and domestic laws".²⁰*

The interdependence of legal rules and standards and the importance of harmonisation has been aptly summarised by Zetsche and Buckley as follows:

"Harmonization of private law consequences of DLT systems could be most useful, although of course this will be a long-term undertaking. In addition, international regulatory cooperation in development of minimum regulatory standards will be key to addressing potential risks, and this begins with the technical harmonization presently underway"²¹

¹⁶ WORLD ECONOMIC FORUM, *Realizing the Potential of Blockchain*, op. cit.

¹⁷ REIDENBERG Joel R., *Lex Informatica: The Formulation of Information Policy Rules through Technology*, 76 Tex. L. Rev. 553 (1997-1998) available at: https://ir.lawnet.fordham.edu/faculty_scholarship/42

¹⁸ EASTERBROOK Frank H., *Cyberspace and the Law of the Horse*, 1996 University of Chicago Legal Forum 207 (1996). Available at: https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?referer=https://www.google.com.mt/&httpsredir=1&article=2147&context=journal_articles

¹⁹ WRIGHT A. & DE FILIPPI P., *Decentralized Blockchain Technology and the Rise of Lex Cryptographia*, (March 2015), available at: <http://socialmachines.media.mit.edu/wp-content/uploads/sites/27/2015/03/Decentralized-Blockchain-Technology-Anonymous.pdf>

²⁰ WRIGHT A. & DE FILIPPI P., op.cit.

²¹ ZETZSCHE Dirk A. and BUCKLEY, Ross P. and ARNER, Douglas W., *The Distributed Liability of Distributed Ledgers: Legal Risks of Blockchain* (August 13, 2017). University of Illinois Law Review, 2017-2018, Forthcoming; University of Luxembourg Law Working Paper No. 007/2017; Center for Business & Corporate Law (CBC) Working Paper 002/2017; University of Hong Kong Faculty of Law Research Paper No. 2017/020; UNSW Law Research Paper No. 52; European Banking Institute Working Paper Series 14.

Risks associated with premature DLT Regulation

Being a trailblazer in DLT regulation comes with risks and this as confirmed by Finck.²² This should serve as a warning not to be carried away with the potential that the blockchain introduces (which is not bad per se) but has to be seriously measured when it comes to early legislative interventions, especially formalistic laws and regulations. A soft approach towards regulating pure technological matters, including architecture, should therefore be paramount whilst remaining focused on regulatory interventions targeting offchain equivalent applications of such technology.

Finck states:

“Despite the still early stages of the technology’s development a number of jurisdictions have already taken the step of enacting new legislation. While this presents the advantages of portraying the jurisdiction as a progressive, blockchain-friendly venue to attract blockchain innovation, it also bears the risk of being premature. Such legislative enthusiasm may indeed prove to have negative consequences in the long term as the technology continues to evolve, which may result in a need for legislative amendment sooner rather than later. As Walch has moreover noted, the terminology surrounding blockchains remains unsettled, which may also lead to complications in relation to the application of such legislative frameworks.”²³

It appears however that Finck’s (and Walch’s) warning have not been strongly echoed within Malta’s proposal, as presented in the Consultation Document, through the consideration of introducing at law terminologies such as “Technology Arrangement”, which the Consultation Document naively defined as “DLT Platforms and related smart contracts”²⁴. In view of the lack of proper legal definitions of DLT Platforms or even the definition of “smart contract”, the introduction of generic and vague definitions at law (such as but not limited to “Technology Arrangement”) might appear to be technology neutral at a first glance but which, in real terms, is nothing but.

Finck continues that:

“Despite the buzz surrounding blockchains it is important to not lose out of sight that the blockchain remains at the very early stages of its development, faced with challenges of scalability, maturity, performance, privacy, security, and, as of now, also wide-spread adoption. There can moreover no doubt that governance structures are starkly under-developed in respect of distributed ledgers. It needs time and experience to develop and this is a key realization that should guide any regulatory action.”²⁵

Such philosophy is also favoured by Wright who contends that the role of regulation with respect to the blockchain should be limited to “implement sensible guardrails to guide its development.”²⁶ MITLA favours this assessment that anything more than “sensible guardrails” with respect to DLT regulation would have dire consequences in the long term.

Offchain Equivalence, regulatory restraint,²⁷ the focus on sector/industry application regulation (as opposed to architectural regulation), technological neutrality and a general light touch approach

²² FINCK, Michèle, *Blockchain Regulation* (August 7, 2017). German Law Journal, 2018, Forthcoming; Max Planck Institute for Innovation & Competition Research Paper No. 17-13 . available at: <https://ssrn.com/abstract=3014641> or <http://dx.doi.org/10.2139/ssrn.3014641>

²³ FINCK, op.cit.

²⁴ Consultation Document, pg ii.

²⁵ FINCK, op. cit.

²⁶ WRIGHT Aaron, ‘*Blockchain’s Opportunities and Risks*’, Testimony Before the Subcommittee on Oversight and Subcommittee on Research and Technology, United States Congress, 14th February 2018, available at:

²⁷ For a detailed analysis on regulatory restraint, please refer to WORLD ECONOMIC FORUM, *Realizing the Potential of Blockchain*, op. cit.

towards regulation will be recurring themes in this Response Document and shall be further developed below.

A risky isolationist approach

Apart from the risks related with premature regulations, the importance of not becoming our own victims through national regulation, especially when faced with a decentralised architecture can never be underestimated. De Filippi is also adamant on this point. She believes that one cannot establish “*a proper policy and regulatory framework for blockchain technologies... at a local or national level*”.²⁸

Malta’s participation in international efforts including the EU Blockchain Observatory and work by UNICTRAL and ISO is therefore key. The strong impetus coming from Brussels during the past days on effective trans-national collaboration when addressing emerging blockchain challenges should sufficiently convince Malta that a national isolated approach towards regulation carries **inherent risks**. This should not however be interpreted that Malta should adopt or apply a strict ‘wait and see approach’ but careful consideration must be given to ensure that any regulatory intervention by Malta would not need to be reversed in order to be aligned with these prospected international regulatory developments. This should make the case for a minimalist intervention by Malta at this particular juncture even stronger.

A new type of Regulatory Framework?

The MDIA Bill proposed in the Consultation Document appears to be following a commonly accepted (and so far successful) regulatory model/methodology in Malta whereby a central hierarchical authority is established. MIDIA will, amongst others also be ultimately responsible for the proposed voluntary certification processes of Technology Service Providers and the underlying regulatory frameworks proposed.

In light of the nature of blockchain, MITLA questions whether the governance structure, as well as its main functions, as reflected in the Consultation Document are indeed necessary.

Finck strongly holds that regulators should resist the temptation of prematurely creating new institutions when it comes to blockchain regulation.²⁹ This approach is also embraced by De Filippi who holds that: “*We need to figure out new decentralized governance systems that can be easily deployed on top of these decentralized infrastructures*”.³⁰

Additionally, the World Economic Forum stated that “*We believe effective regulation and, by extension, effective governance come from a multistakeholder approach where transparency and public participation are valued more highly and weigh more heavily in decision-making*”.³¹

Top-down hierarchical structures should therefore be avoided, and more importance should be given to the establishment of multi-stakeholder governance systems. This also reflects the general position taken by MITLA that the regulatory focus should not be the technology itself but distinct use-cases,

²⁸ WORLD ECONOMIC FORUM, Realizing the Potential of Blockchain, op. cit.

²⁹ FINCK, op.cit.

³⁰ WORLD ECONOMIC FORUM, Realizing the Potential of Blockchain, op.cit., quoting De Filippi.

³¹ WORLD ECONOMIC FORUM, Realizing the Potential of Blockchain, op.cit.

where centralized authorities (as the proposed MDIA) should serve as a facilitator, as opposed to a regulator proper.

In this sense, MITLA contends that the focus of the MDIA should be primarily to serve as a catalyst and a body to co-ordinate the various efforts that will need to be initiated by relevant key stakeholders, most importantly the supervisory and national regulators which are directly responsible for industry/vertical specific licensable activities. Such approach would reflect more the proposal of Wright with respect to the setting up of a US National Blockchain Commission³² where the strategic direction is not to have a Regulator (in a traditional sense) but more akin to the roles and responsibilities of the Joint Co-Ordination Board as proposed in the Consultation Document.

MITLA does not believe that the setting up of a National Technology Ethics Committee is required or in any way beneficial, again reflecting strict technological neutrality principles. In this regard ethics - and perhaps moral philosophy - are antecedent to a bill and should not be left as possible outcomes of it. MITLA favours an approach which codifies ethical rules (in a technology neutral way) as this has a valuable declarative function. The law is thus graced with statements of affirmative obligations and aspirational principles and not merely prohibitions. Likewise, in the ethical domain, there are multiple international fora in which Malta should actively participate to cultivate a shared set of values and principles – rather than manage its own subset by committee.

Traditional methods of regulatory intervention, including the setting up of new hierarchical structures will simply not work. This would be further exacerbated by the fact that the Consultation Document somehow focuses on technological regulation and not specific use-case regulation. Finck continues that:

“A process of polycentric co-regulation should be adopted as it acknowledges the limits of traditional methods of top-down legislation in the context of technological innovation yet also ensures that public policy objectives are respected while ensuring a continuing dialogue between multiple stakeholders.”³³

The suggested role of MDIA should therefore reflect more such polycentric co-regulation as opposed to the proposed structure/models contained in the Consultation Document and give more prominence to the Joint Co-Ordination Board.

De Filippi and Hassan paint a more bleak picture on the risks of early regulation when applied to the block chain:

“While allowing for anyone to implement and deploy their own techno-legal frameworks has strong democratic potential, if coopted by the current economic or political order, the process might possibly lead to a regime of inflexible (perhaps even totalitarian) networked governmentality.”³⁴

Such sentiments are also echoed by Werbach:

“Excessive or premature application of rigid legal obligations will stymie innovation and forego opportunities to leverage technology to achieve public policy objectives.”³⁵

³² WRIGHT, op. cit.

³³ FINCK, op. cit.

³⁴ DE FILIPPI P. & HASSAN S., *Blockchain Technology as a regulatory technology: From code is law to law is code*, First Monday, (December 2016), available at: <http://firstmonday.org/ojs/index.php/fm/article/view/7113/5657>

³⁵ WERBACH Kevin D., *Trust, But Verify: Why the Blockchain Needs the Law* (August 1, 2017). Berkeley Technology Law Journal, Forthcoming. Available at: <https://ssrn.com/abstract=2844409> or <http://dx.doi.org/10.2139/ssrn.2844409>

Werbach's appreciation is even more relevant when one considers that any proposed rules/regulations applied to DLT Platforms will also apply the application and use of such technologies by the State (as a method to modernise public-service provision). Such regulation therefore not only risks being counterproductive when it comes to the attraction of investment but also tie the hands of state entities eager to join the DLT revolution.

Finck stresses the point that when we are dealing with blockchain and law "old regulatory paradigms don't necessarily suit new technologies."³⁶ Adding that "*Regulation should indeed at the same time allow for the protection of public interest objectives and stimulate innovative blockchain inventions. For this to happen, regulators need to be mindful to not repeat past mistakes, which include a delayed interest in the new technology and the premature creation of new institutions.*"³⁷

Wright and De Filippi further add a constitutional, human rights layer within the discussion regarding the regulation of the blockchain (especially permissionless systems) itself by stating that:

*"New regulatory approaches therefore need to be taken, else the fundamental principles of an open Internet and permissionless innovation could eventually disintegrate."*³⁸

In any event, hopefully, even if the argument of governance (as opposed to formal regulation) wins, "improved governance need not imply formal governmental legislation or regulation".³⁹

Focus on ex Post and not ex Ante

Whilst new regulatory regimes might be required for DLT, this discussion also must draw important parallels with the principles behind ex ante and ex post regulation of technology, including the Internet and the blockchain. In the words of the Acting Chairman of the US Federal Communication Commission:

*"[i]n dynamic, innovative industries like internet services, an ex post case-by-case enforcement-based approach has advantages over ex ante prescriptive regulation. It mitigates the regulator's knowledge problem and allows legal principles to evolve incrementally. A case-by-case approach also focuses on actual or likely, specifically-pled harms rather than having to predict future hypothetical harms."*⁴⁰

As a foundational technology, DLT cannot be simply regulated on an ex ante basis but must, as discussed separately in this Response Document look at particular usage case scenarios, as opposed to attempting to regulate the technology *per se* whilst also focusing on 'recycling' existing laws to ensure that they can be retrofitted (if at all required) to adapt and cater for blockchain technologies.

The case for ex post as opposed to ex ante regulation can also be seen in practice with regards to Electronic Communications, a sector typically under the responsibility of the Malta Communications Authority and which register technological developments on an on-going basis. Normally, it is only the regulation of limited resources (such as spectrum allocation) that would follow strict ex ante rules

³⁶ FINCK, op. cit.

³⁷ FINCK, op. cit.

³⁸ WRIGHT A. & DE FILIPPI P., op. cit.

³⁹ WORLD ECONOMIC FORUM, Realizing the Potential of Blockchain, op. cit.

⁴⁰ OHLHAUSEN, Maureen K, *Comment in the Matter of Restoring Internet Freedom*, Before the Federal Communications Commission, Washington, 17th July 2017. Available at:

https://www.ftc.gov/system/files/documents/public_statements/1231563/mko_rif_comment_7-17-2017_final.pdf

whilst many other matters would be regulated by the Malta Communications Authority through an ex post framework where regulatory intervention is only made in those situations where the market would necessitate such intervention including issues relating to competition and consumer affairs. Any regulatory approach towards blockchain in general should also follow the same approach and this not to stifle technology development and potential investments in this sector.

Recent Regulatory Attempts

A word of caution must be said with respect to licensing regimes in general. Recent history is already rife with situations where, irrespective of good intentions, regulating such a nascent technology did not leave the intended results. The best example of this is the BitLicense experience where *“New York passed such regulations in a regulatory vacuum and now state and federal laws are catching up to it, oftentimes with less-than-stellar coordination between regulators, causing a compliance nightmare”*.⁴¹

The World Economic Forum had this to say about BitLicense and its main architect, Lawsky:

*“Lawsky concluded, “Maybe we need a new type of regulatory framework to deal with something that is just qualitatively different? His Proposal, the BitLicense, was the first serious attempt to provide a regulatory lens on the industry. A controversial piece of law, it revealed how even well-intentioned regulations can produce unintended consequences. When the BitLicense went into effect, there was a mass exodus of companies, such as Bitfinex, GoCoin and Kraken from New York; they cited the prohibitive cost of the license as the main cause. The few that stayed were well-capitalized and more mature businesses.”*⁴²

Furthermore, whilst other jurisdictions, such as Gibraltar, namely the Gibraltar Financial Services Commission, published laws⁴³ limited in scope to the usage of DLT within a financial services environment, where focus is on whether the business relates to “the use of distributed ledger technology for storing and transmitting value belonging to others”⁴⁴ and therefore can be said to be a vertical regulation of DLTs, the Consultation Document proposed by Malta gives the impression that the regulatory focus will be a horizontal one independent of the fact as to whether the use of DLTs will be for the storing and transmission of “value belonging to others”. MITLA does not believe that the extension of DLT regulation, even if structured on principles-based rules akin to Gibraltar, should extend in scope to all Distributed Ledger Technology Platforms. Once more, the deficiencies at a definition level of the terms used in the Consultation Document do not assist readers to understand exactly the extend to which the proposed TAS Bill and MDIA Bill will apply.

Unlike the Maltese approach, one could say that Gibraltar positioned its strategy around specific use-cases (as in the financial services sectors) which renders national government intervention more plausible and which reflects to position adopted by Maupin:

⁴¹ See for example, <https://www.coindesk.com/contortions-compliance-life-new-yorks-bitlicense/>

⁴² WORLD ECONOMIC FORUM, *Realizing the Potential of Blockchain*, op. cit.

⁴³ Financial Services (Distributed Ledger Technology Providers) Regulations 2017, Gibraltar [http://www.gfsc.gi/uploads/DLT%20regulations%20121017%20\(2\).pdf](http://www.gfsc.gi/uploads/DLT%20regulations%20121017%20(2).pdf)

⁴⁴ Financial Services (Distributed Ledger Technology Providers) Regulations 2017, op. cit., Schedule 1.

“Governments should tackle the new regulatory conundrums of an increasingly disintermediated global economy by focusing on DLT’s individual use cases rather than its underlying enabling technologies.”⁴⁵

MITLA believes that Malta’s approach should not focus on the technology but on sector specific usage, regulating adoption in specific applications as opposed to technology specific (and industry neutral) regulation.

Technology Neutrality and Law

The success of international statutes dealing with technology and law, including the EU Directive on Data Protection⁴⁶ (soon to be superseded by the General Data Protection Regulation⁴⁷, the EU Directives on Electronic Commerce⁴⁸ and Electronic Signatures⁴⁹ (as augmented by the eIDAS Regulation⁵⁰) as well as the seminal work by UNICTRAL⁵¹ underlines the importance of technology neutral legal frameworks. These legal texts, some of which are over 20 years old, are a living testament to the fact that whilst technology changes (the www was merely 2 years old in 1996) this does not necessarily mean that new laws need to be introduced.

The advent of blockchain has once again reignited discussions (as has happened with the dawn of the Internet) as to whether the law should (or could) run as fast as technological innovation and whether specific new laws are required.

Having laws coping with technological change is indeed an art form but has to follow a light handed approach.⁵²

Bennett postulated that: *“A metaphor that suggests that law simply needs to ‘move faster’ is unhelpful and, if it leads anywhere, is likely to result in rushed and poorly conceived responses.”⁵³* Such statement could not be more relevant today when faced with the emerging reality of DLT.

Commenting on the need (or otherwise) of regulating the blockchain, Finck concludes:

“Indeed, if regulators were to adopt hard binding rules now, they run the risk of quickly facing a need for amendment.”⁵⁴

It is an accepted fact that while legislation can create legal certainty and provide evidence of how a given legislative strategy unfolds, rules that are too detailed risk becoming burdensome for operators in the area, potentially stifling innovation and causes headaches for law enforcement agencies compelled to enforce principles they know don’t work.⁵⁵

⁴⁵ MAUPIN Julie A., *Mapping the Global Legal Landscape of Blockchain and Other Distributed Ledger Technologies* (July 16, 2017). available at: <https://ssrn.com/abstract=2930077> or <http://dx.doi.org/10.2139/ssrn.2930077>

⁴⁶ Directive (EU) 95/46/EC

⁴⁷ Regulation (EU) 2016/679

⁴⁸ Directive (EU) 2000/31/EC

⁴⁹ Directive (EU) 1999/93/EC

⁵⁰ Regulation (EU) 910/2014

⁵¹ Including its 1996 Model Law on Electronic Commerce and 2001 Model Law on Electronic Signatures.

⁵² BENNETT Moses, Lyria, *Agents of Change: How the Law ‘Copes’ with Technological Change* (January 27, 2012). Griffith Law Review, Vol. 20, No. 4, pp. 764-794, 2011; UNSW Law Research Paper No. 2012-2. available at: <https://ssrn.com/abstract=2000428>

⁵³ BENNETT, op. cit.

⁵⁴ FINCK, op. cit.

⁵⁵ FINCK, op. cit.

Bennett adds:

“The law should not race ahead by anticipating technological trajectories that may never come to pass. Rather, a useful goal should be to have mechanisms in place to ensure that law is designed around the sociotechnical landscape of the present or, more realistically, the recent past.”⁵⁶

When looking at regulating the blockchain, the technological maturity has not yet reached a sufficient level where one can gauge, even more introduce, legislative and regulatory mechanisms which can somehow address all the existing and emerging challenges that such technology is bringing.

Furthermore, as discussed in a UK Government Report on Blockchain;

“When it comes to the regulation of distributed ledgers, the challenge thus consists in striking a ‘balance between safeguarding the interests of participants in the system and the broader interests of society whilst avoiding the stifling of innovation by excessively rigid structures.”⁵⁷

The case for technology neutral legislation/regulation with respect to the blockchain has been summarised by Professor Wright during his US Congressional testimony in February 2018, where he hoped that the United States would proceed with “thoughtful, technology-neutral regulation” that:

- Permits the exchange of blockchain-based assets and scarce digital goods, particularly those used, purchased, and enjoyed by consumers;
- Enables parties to build new blockchain-based protocols, without fear of regulatory scrutiny to address the technical limitations outlined previously;
- Provides a predictable, minimalist, consistent, and simple legal environment that protects consumers without insulating entrenched market participants; and
- Re-examines existing laws and regulations that may hinder blockchain-based commerce.⁵⁸

Wright’s comments encapsulate MITLA’s position when it comes to DLT regulation as they also mirror the concepts of regulatory restraint, offchain equivalence as well as recycle box theories.

Any law or legislative intervention which is not structured on technology neutral principles is bound to failure. This is why MITLA questions whether any attempt to define at law a ‘Technology Arrangement’, at this embryonic stage of the evolution of DLT is dangerous.

De Filippi and Hassan believe that: *“Law is intentionally ambiguous, so that it can be more easily applied on a case-by-case basis. It is the overlapping of multiple legal provisions, which creates a solid regulatory framework, with multiple limitations and exceptions in order to accommodate the complexity and unpredictability of human society.”⁵⁹*

⁵⁶ BENNETT, op. cit.

⁵⁷ FINCK, quoting Government Office for Science, ‘Distributed Ledger Technology: Beyond Block Chain. A Report by the UK Government Chief Scientific Adviser’ available at <https://www.gov.uk/government/news/distributed-ledger-technology-beyond-block-chain>

⁵⁸ WRIGHT, op. cit.

⁵⁹ DE FILIPPI P. & HASSAN S., *Blockchain Technology as a regulatory technology: From code is law to law is code*, First Monday, (December 2016), available at: <http://firstmonday.org/ojs/index.php/fm/article/view/7113/5657>

Focus on use-cases rather than underlying technology

Favouring an Offchain Equivalence philosophy/methodology, both Finck and Maupin state that the focus should remain on a use-case basis which is completely separate and independent from underlying technologies.

“Given the diversity of possible blockchain platform designs, no ‘one-size-fits all’ legal analysis is possible. Instead, each application of blockchain technology will need to be considered on its facts.”⁶⁰

In this sense, MITLA believes that a minimalist approach where the use of DLT is intrinsically linked to its vertical substantive application (especially in current regulated sectors such as financial services) should be the driving factor behind any regulatory intervention. In this sense, the legislators focus should be targeted towards regulating, for example VC’s and ICOs, using offchain equivalence principles, as opposed to try and encapsulate, or even regulate the nascent underlying foundational architecture that is the blockchain.

Furthermore, one should be careful from creating legal dependencies between sectoral regulators (such as the MFSA or MGA) with the creation of a centralised DLT regulator as this might create unnecessary central choke (or failure) points which might prejudice the regulatory adoption of the blockchain within specific sectors. Any centralized approach should not focus on regulatory aspects but instead on co-operation and polycentric governance, akin to the model proposed by Wright.⁶¹

The Recycle Box Argument

Echoing the principles of regulatory restraint, offchain equivalence and minimalist regulatory intervention as further described in this Response Document, MITLA believe that a very strong argument can be made to espouse the Recycle Box argument as presented by Maupin.

Maupin believes that:

“Recycle box use cases adopt blockchain/DLT solutions to accomplish indisputably permissible objectives in “better, faster, cheaper” ways. As such, they necessitate only minor adaptations to existing national and international regulatory frameworks. In this sense, the existing legal frameworks can be “recycled” for many blockchain use cases.”⁶²

According to Maupin, a simple way to identify potential recycle box blockchain innovations is to ask the following questions:

1. Is this blockchain use case essentially replacing a traditional function of some sort?
2. Is this blockchain solution being deployed by one or more regulated actors within its/their traditionally regulated line(s) of business?

⁶⁰ BACON Jean and MICHELS Johan David and MILLARD Christopher and SINGH Jatinder, *Blockchain Demystified* (December 20, 2017). Queen Mary School of Law Legal Studies Research Paper No. 268/2017. available at: <https://ssrn.com/abstract=3091218>

⁶¹ WRIGHT, op. cit.

⁶² MAUPIN, op. cit.

“If the answer to either of these questions is yes, it’s highly likely that governments and intergovernmental regulatory bodies can accommodate the new blockchain use case within their existing regulatory regimes.”⁶³

The emergence and success of technology neutral legislation, as transposed from international statutes and conventions described above, makes it possible for a recycle principle to be easily and quickly adopted without entering into detailed merits regarding the underlying technology which is still in constant development and which still lacks any harmonised standardisations of legal definitions at an international (but also national) level.

Such approach would also be more welcoming for experimentation, including the use of properly mapped sandboxing regimes.

Sandboxing Initiatives – Fostering Incubation

The beneficial concepts behind sandboxing, especially when applied to how technology is shaping and disrupting well established and highly regulated business sectors are being increasingly embraced. At a local level, the work carried out by the Malta Gaming Authority in this regard is laudable and merits recognition.⁶⁴

In order to understand (and potentially consider some form of regulation to) the 'blockchain', one needs to be exposed (and learn from) to its application. Sandboxing is certainly the preferred method to do that, thereby creating a process of continuous learning/evolution of Malta's approach to the technologies across all sectors. As opposed to hard legal statutes, a regulated sandboxing environment, turning Malta into a DLT test bed or incubator, runs better chances to attract international interest (especially start-ups) where innovation happens here and through such activities Malta can learn the next regulatory (if at all) steps required.

The potential of sandboxing in the context of regulating the blockchain has also been recognised by Maupin, Wright and De Filippi.

Maupin states that:

“Establishing a global regulatory sandbox for blockchain and distributed ledger technologies that is cross-sectoral, start-up-friendly, and use-case-specific is the most sensible way forward. Broadly representative national and international bodies with strong and cross-cutting development mandates are arguably best placed to advance this kind of global sandbox initiative.”⁶⁵

Wright and De Filippi continue:

“Decentralized institutions and governance models could be designed and constructed iteratively, through use and experimentation of emergent blockchain-based applications, rather than being imposed by centralized legal edicts. This could significantly contribute to the process of disintermediation that has characterized the online world.”⁶⁶

⁶³ MAUPIN, op. cit.

⁶⁴ See for example <http://www.mga.org.mt/malta-gaming-authority-issues-call-interested-parties-register-interest-provide-details-distributed-ledger-technology-dlt-andor-cryptocurrency-projects/>

⁶⁵ MAUPIN, op. cit.

⁶⁶ WRIGHT A. & DE FILIPPI P., op. cit.

A DLT sandboxing strategy will allow the country to work with new businesses and modus operandi to understand how innovations can be regulated or if specific regulatory intervention (as opposed to 'recycling') is indeed necessary.

Malta should follow the successful sandboxing measures carried out by the FCA⁶⁷ in the UK and extending their process to cater for blockchain based businesses. Now at its third cohort, the interest of DLT projects falling under the sandboxing regime is constantly increasing.

Naturally, leveraging the sandbox as a marketing activity to attract innovation to our shores, and having the cross educational effect to understand where such technology is going cannot be underestimated as this would create the opportunity to be exposed to novel ideas and approaches from the innovators themselves, fostering a testable market to understand dynamics and forces at play, leveraging that to better regulate it on a longer term basis.

Voluntary Certification Process & Technology Arrangements

The Consultation Document proposes the introduction of a voluntary certification of 'Technology Service Providers and 'Technology Arrangements'. Whilst one understands the reasoning behind a voluntary certification process as a soft measure that could assist attracting DLT related industries and applications to Malta, several key considerations (based on the level of detail contained in the Consultation Document) must be made:

- What will be costs associated with such certifications as well as the "ongoing registration requirements"? And who will finally bear such costs?
- Against what industry standards (if available) will the Auditors work?
- What DLT Platforms will be covered by such voluntary certification schemes? Will such voluntary regimes apply to both permissioned and permission-less systems?
- Will such verification schemes apply to any use of DLT or only in those situations where the offchain equivalent is already licensable?

Answering these high-level questions will indeed shed more light on the reach and implications of a voluntary certification/registration scheme. Unfortunately, as already discussed, the definitions included in the Consultation Document, primarily those relating to DLT Platforms, Technology Arrangements, do not assist the reader in formulating a specific position on the matter.

⁶⁷ <https://www.fca.org.uk/news/press-releases/fca-reveals-next-round-successful-firms-its-regulatory-sandbox>

Smart Contracts

Section 5.1 of the Consultation Document makes reference to the fact that “the current legislative framework does not contemplate having contracts in ‘smart’ format”.⁶⁸

With respect to smart contracts and the blockchain, there is an increasing consensus⁶⁹ that UNCITRAL model laws, especially the Model Law on Electronic Transferable Records of July 2017⁷⁰, as well as applicable EU Directives already cater for the recognition of a ‘smart contract’ as a form of ‘electronic contract’.

More so, even though no formal specific legal definition of smart contract exists, our own Electronic Commerce Act⁷¹ provides that an ‘electronic contract’ “means a contract concluded wholly or partly by electronic communications or wholly or partly in an electronic form;”

MITLA contends that a smart contract, in its intrinsic simple and theoretical form, is already contained in the definitions found in the Electronic Commerce Act as it is a “contract...wholly or partly in electronic form”.

Having said that however, this does not mean that the legal challenges with respect to smart contracts are all catered for under current national and international legislation. This once again strengthens the arguments for regulatory restraint, minimalism and recycling theories and underlines the importance of technology neutrality and law.

Skarloff believes that:

“Proponents of the smart contract revolution, therefore, do not describe the technology as a way to merely enhance human activity; they argue it can replace every stage of agreement formation and performance. From a purely technical standpoint, they might be right.”⁷²

This smart contract revolution however must be seen in light of currently accepted legal norms and technology neutral definitions which does not require any revolution from a definition layer.

Embracing the ‘recycle box’ argument when applied to smart contracts, Raskin adds that:

“One way of reducing uncertainty is by situating the new in the old. While there may be many barriers to the adoption of smart contracts, legal uncertainty need not be one of them. Courts need not upend extant jurisprudence to accommodate smart contracts”.⁷³

MITLA stresses that an intimate understanding of Raskin’s (but also the works of Werbach and De Filippi) should be a necessary starting point for any discussion about smart contracts.

⁶⁸ Consultation Document, pg. 17

⁶⁹ See for example MUKHERJEE Aaheree, *Smart Contracts – Another Feather in UNCITRAL’s Cap*, Cornell International Law Journal, (February 2018), available at: <http://cornellilj.org/smart-contracts-another-feather-in-uncitrals-cap/> and DE CARIA, Riccardo, *A Digital Revolution in International Trade? The International Legal Framework for Blockchain Technologies, Virtual Currencies and Smart Contracts: Challenges and Opportunities*, UNCITRAL, http://www.uncitral.org/pdf/english/congress/Papers_for_Programme/5-DE_CARIA-A_Digital_Revolution_in_International_Trade.pdf

⁷⁰ http://www.uncitral.org/pdf/english/texts/electcom/MLETR_ebook.pdf

⁷¹ Electronic Commerce Act, Chapter 426 of the Laws of Malta.

⁷² SKARLOFF, Jeremy, *Smart Contracts and the Cost of Inflexibility* (September 18, 2017). University of Pennsylvania Law Review, Vol. 166, 2017. available at: <https://ssrn.com/abstract=3008899>

⁷³ RASKIN Max, *The Law and Legality of Smart Contracts* (September 22, 2016). 1 Georgetown Law Technology Review 304 (2017). available at: <https://ssrn.com/abstract=2959166> or <http://dx.doi.org/10.2139/ssrn.2842258>

A case for Hybrid Contracts

A potential way to ease in the introduction of smart contracts as contracts proper requires a much more in-depth understanding of the realities and challenges which smart contracts introduce (including self-execution, potential non-immutability and others) would be not to simply consider law is code and code is law (between the parties to the contract) but to seriously consider, at least at this early stage of maturity of the underlying technology) specific ways to reconfirm the legal recognition of smart contracts through hybrid models, where the code is still subject to a natural language/semantic equivalent which in case of conflict (between the code and the natural language/semantic version) would take precedence. Such an adoption would work in favour of higher legal certainty.

The debate between code contracts and semantic contracts has been explained quite well by Skarloff, who warns that this smart contract revolution is not just a legal discussion as it could also have dire economic impacts.

“[S]hifting away from human-language contracts creates new inefficiencies. These stem from three features of smart contracts: automation, which requires that every agreement be formed from fully-defined terms; decentralization, which conditions performance on verification by third parties; and anonymity, which eliminates the use of commercial context to give meaning to agreement terms. As a result, it is extremely costly to form smart contracts in a volatile environment or whenever there’s a level of uncertainty surrounding the agreement. On the other hand, semantic contracts are flexible. They enable parties to use performance standards, generally-defined contract terms, to create an enforceable agreement without requiring complete knowledge of what might happen in the future. Standards also allow parties to responsively incorporate commercial customs into their agreement, circumventing the need for explicit but redundant negotiation. And once their agreement is formed and executed, the parties are nonetheless free to dynamically shape their relationship through informal modifications or by selectively enforcing breaches. These two forms of flexibility—linguistic ambiguity, and enforcement discretion—create important efficiencies in the contracting process. By eliminating this flexibility, smart contracting will impose costs that are more severe and intractable than the ones it seeks to solve.

Fraudulent and unconscionable contract terms, traditionally policed by courts, would likely proliferate as “code-savvy parties” take advantage of the “code-naive.” Decentralized blockchain adjudicators would be unable to efficiently create doctrine around such fact-intensive questions. And though some proponents have envisioned smart contracts with special intervention functions for traditional courts, they presume that traditional judges will interpret smart contracts using traditional contract doctrine. Code fails to contain the interpretive richness conveyed by semantic language, and so intervening courts would be forced to essentially rebuild entire agreements from scratch. This is likely intolerable to both code-savvy and code-naive parties to a smart contract. These tradeoffs suggest that technology cannot replace what is fundamentally a human activity. Smart contracting certainly proposes exciting new changes to the way transactions might take place, and presents a meaningful step forward from the days of EDI. But a full-scale smart contracting revolution would introduce costs far more extreme and intractable than the ones it seeks to solve. Proponents who argue for a complete replacement of semantic contracts underestimate

*the power of fluid human behavior and judgment in the contracting process. The flexibility of semantic contracts is a feature, not a bug.*⁷⁴

Other factors favouring the adoption of hybrid models when it comes to smart contracts include increase reliance of prose objects⁷⁵ acting as a bridge between code and the connected semantic/natural language agreement as well as discussions as to the importance of separating consensus record-keepers from users.⁷⁶

Werbach and Cornell add:

“We conclude that smart contracts offer novel possibilities, may significantly alter the commercial world, and will demand new legal responses. But smart contracts will not displace contract law. Understanding why not brings into focus the essential role of contract law as a remedial institution. In this way, smart contracts actually can illuminate the role of contract law more than they can obviate it.”⁷⁷

With respect to smart contracts as carriers of regulatory intervention (and not merely as contract between the parties), Reyes makes also an interesting comparison.

Reyes refers to the computer code built to implement law through DLT as “crypto-legal structures.” She argues that as governments build crypto-legal structures, the computer code should be treated as a foreign legal system. Doing so enables regulators to bake certain elements of regulatory theory into the code, making regulatory objectives more transparent to relevant industry actors and offering public benchmarks for assessing which entities are responsible corporate citizens. Treating computer code as foreign law also enables the use of comparative law as a methodological paradigm for considering the broader impact crypto-legal structures will have on law, including the disruption of substantive law, legal structures and legal culture. As crypto-legal structures interact with each other and with those governed by the law, cryptolaw will emerge as a new legal discourse and philosophy that anticipates the broader implications, challenges and consequences of technology’s increasing capacity to enable more transparent, efficient, and self-executing law.⁷⁸

Most importantly, the application of ‘Ricardian’ Contract doctrines within a smart contract environment can be seen as another way justifying the adoption of a hybrid contractual model favoured by MITLA and should be seriously explored.

Ricardian contracts are a similar concept to Smart Contracts, but smart contracts are abstract notions relating to the automated execution of already agreed contracts, while Ricardian contracts represent a design pattern that captures the intent of agreeing parties. In that sense, Ricardian contracts are a vehicle for the implementation of smart contracts.⁷⁹

⁷⁴ SKARLOFF, op. cit.

⁷⁵ For a detailed explanation of how prose objects can serve as the connection between automated systems and human systems, please see HAZARD, James and HAAPIO, Helena, *Wise Contracts: Smart Contracts that Work for People and Machines* (February 23, 2017). Erich Schweighofer et al. (Eds.), *Trends and Communities of Legal Informatics. Proceedings of the 20th International Legal Informatics Symposium IRIS 2017. Österreichische Computer Gesellschaft, Wien 2017*, pp. 425–432 (ISBN 978-3-903035-15-7); Jusletter IT, 23 February 2017. available at: <https://ssrn.com/abstract=2925871> or <http://dx.doi.org/10.2139/ssrn.2925871>

⁷⁶ CONG, Lin William and HE, Zhiguo, *Blockchain Disruption and Smart Contracts* (January 10, 2018). available at <https://ssrn.com/abstract=2985764> or <http://dx.doi.org/10.2139/ssrn.2985764>

⁷⁷ WERBACH Kevin D. and CORNELL Nicolas, *Contracts Ex Machina* (March 18, 2017). 67 Duke Law Journal, Forthcoming. available at: <https://ssrn.com/abstract=2936294>

⁷⁸ REYES, Carla, *Conceptualizing Cryptolaw* (February 9, 2017). Nebraska Law Review, Forthcoming. Available: <https://ssrn.com/abstract=2914103>

⁷⁹ CHOHAN, Usman, *What Is a Ricardian Contract?* (December 11, 2017). Available at: <https://ssrn.com/abstract=3085682> or <http://dx.doi.org/10.2139/ssrn.3085682>

Legal Personality of Technology Arrangements

MITLA contends that, in light with the other high-level recommendations being made by means of this Response Document, it is still relatively premature to discuss the legal personality of technology arrangements. In any case, such discussions should be limited to decentralised autonomous organisations and not widened in scope to include DLT Platforms or smart contracts in general. Additionally, it would not be prudent to recognise at this early stage any form of separate legal personality when it comes to regulated industries/sectors (including gaming and financial services).

In general, further analysis and research on the concept of legal personality (strictly applied to decentralised autonomous organisations) is required.

The application of current theories such as the nearest person theory,⁸⁰ applying or extending PCCs to decentralised autonomous organisations⁸¹ as well as general company law concepts⁸² need to be studied further and this as an evolutionary step (and not an initial step) of attempts to regulate DLTs and the related ecosystems.

In the words of Bayern et⁸³ *“existing laws might provide a potentially unexpected regulatory framework for autonomous systems”*.

Zetsche et conclude that:

*“Yet while the law may be dull and the technology exciting, the impact of the law cannot be simply wished away. With data distributed among many ledgers, legal risk will remain. DLT projects may well be found, by courts, to constitute joint ventures with liability spread across all owners and operators of systems serving as distributed ledgers.”*⁸⁴

If discussions regarding regulating the blockchain are still embryonic, discussions about legal personality are still at a smaller cellular level. Further maturity and recognition of emerging legal doctrines is required.

Proposed Framework Applicable to ICOs and the Provision of certain services in relation to VCs

MITLA welcomes in principle the proposals favouring the introduction of a framework relating to VCs, ICOs and related services as it epitomises the points being raised in this Response Document, mainly offchain equivalence and regulatory restrained. Through the various developments and warnings being issues by international and national regulators in relation to cryptocurrencies and related

⁸⁰ WRIGHT A. & DE FILIPPI P., op. cit.

⁸¹ See for example: CLYDE & Co, Block Chain and the Law, an Uncharted Landscape, https://www.clydeco.com/uploads/Files/CC010565_Blockchain_brochure_10-06-16_LOWRES.PDF

⁸² BAYERN, Shawn and BURRI, Thomas and GRANT, Thomas D. and HAUSERMANN, Daniel M. and MOSLEIN, Florian and WILLIAMS, Richard, *Company Law and Autonomous Systems: A Blueprint for Lawyers, Entrepreneurs, and Regulators* (October 10, 2016), Hastings Science and Technology Law Journal 2 (Summer 2017) 135-162. Available at <https://ssrn.com/abstract=2850514> or <http://dx.doi.org/10.2139/ssrn.2850514>

⁸³ BAYERN et., op. cit.

⁸⁴ ZETZSCHE Dirk A. and BUCKLEY, Ross P. and ARNER, Douglas W., *The Distributed Liability of Distributed Ledgers: Legal Risks of Blockchain* (August 13, 2017). University of Illinois Law Review, 2017-2018, Forthcoming; University of Luxembourg Law Working Paper No. 007/2017; Center for Business & Corporate Law (CBC) Working Paper 002/2017; University of Hong Kong Faculty of Law Research Paper No. 2017/020; UNSW Law Research Paper No. 52; European Banking Institute Working Paper Series 14. available at:

services it can be easily concluded that the 'happy days' of ICOs and virtual currencies are beginning to end.

Such substantive regulation (as opposed to generic technology regulation) should be perceived as the quickest and safest starting point to provide a higher degree of legal certainty within this space even though one still requires to review that actual text of and proposed legislative framework in this regard.

MITLA shall remain attentive to developments and comment on these local developments once the draft VC Bill is available for public consumption.

6. Conclusion

The comments being put forward by MITLA, as further described in this Response Document can be synthesized into eight (8) High Level Recommendations:

- Resist temptation to set up overly complex hierarchal authorities. Favour polycentric as opposed to traditional regulation. Focus on governance.
- Ensure active participation in EU and international standardisation efforts including the EU Blockchain Observatory and ISO, amongst others.
- Focus on Offchain Equivalence, implementation of practical vertical use cases as opposed to technology/architecture regulation.
- Implement 'Recycle Box' legislative exercises. Apply ex post not ex ante regimes.
- Provide a predictable, minimalist, consistent, and simple legal environment and revise the applicability of current rules to enhance legal certainty.
- Drive blockchain adoption through sandboxing and public sector applications as well as incentives and increase national R&D efforts. Foster incubation.
- Promote, even through minor legislative interventions, the adoption of Hybrid Smart Contracts
- Restrict discussions on legal personality (if at all) to decentralised autonomous organisations

MITLA will naturally remain available and eager to engage in more in-depth discussions with the authorities and relevant stakeholders regarding the high-level conceptual comments provided herein.

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