

**Nomina ta' Joshua Ellul bhala  
non-executive Chair tal-Awtorità tal-Innovazzjoni Diġitali ta' Malta**

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***Mistoqsijiet sottomessi mill-Membri tal-Gvern***

**1. Inti persuna ta' esperjenza kbira fil-qasam tal-informatika, kif dan ser jghinek fil-kariga mhix eżekuttiva tieghek, jekk din ser tinghata lilek?**

I have gained extensive experience in the field of ICT over the past 18 years: from development of systems built completely by myself, to working with teams projects, to working on cutting edge research within the field of innovative technologies which fall within the remit of the Malta Digital Innovation Authority. I have been exposed and immersed in various aspects pertaining to innovative technologies including the development of such technology and also pushing the boundaries of the state of the art. The innovative technology industry is a fast paced one in which one must keep up, not only, with the latest technology developments but also be at the forefront of proposing innovative solutions. As a University of Malta academic, I actively undertake research in aim of furthering the state of the art within the area of innovative technology. As a lecturer I have worked on curriculum development of not only technical aspects but also on innovative technology curriculum targeted for a non-technical audience and have provided extensive training sessions and lectures on the topic. As a technologist, I provided consultation in regards to recent legislation surrounding innovative technologies; and as director of the Centre for Distributed Ledger technologies I have been leading and working together with legal, business and technical oriented academics and professionals to develop a multidisciplinary Masters programme. It is with such vast experience that I understand not only the technical underpinnings of related technology, but also am aware of industry challenges.

My experience will enable for a strategy which is supported by: (i) an understanding and appreciation of what it actually takes to develop innovative technology; (ii) active involvement in research and development of innovative technology; (iii) on-the-ground insight of educational requirements to facilitate digital innovation for the specific sector as well as the general public; (iv) an understanding and appreciation for regulatory requirements and challenges of such emerging technology; (v) leadership skills and vision in regards to where to take the MDIA and what challenges it will face in the light of such fast paced emerging technology; and (vi) links to industry players both locally and international.

**2. X'taħseb li huma l-isfidi ewlenin li qed jiffaċċja pajjiżna fil-qasam tal-innovazzjoni diġitali?**

The sector of digital innovation is a fast paced one, which, after all, is implied, as innovation is constantly on the move. Similarly, the regulation of digital innovation will be required to keep up with continual advances of such a sector, and undoubtedly it often requires exploring uncharted areas. It will indeed be a challenge for Malta to keep up with such a fast paced industry, to analyse associated risks and propose solutions that will keep Malta ahead of the game without sacrificing quality or reputation.

Another challenge which Malta faces is that of human resources. Whilst Malta is attracting investment and creating new job opportunities, it requires an equal number of human resources to fill such

positions. Fulfilling such industry demands will require attracting foreign talent to Malta to meet the immediate resource gap. Efforts to fill the human resources gap should also envisage beyond the immediate challenge and be complemented with a longer-term sustainable solution to encourage local students to choose a career path within such a thriving industry. In addition, through national initiatives, Malta could aim to attract talent by attracting more local and foreign students to study digital innovation related topics in Malta, which could duff-tail into filling local vacancies. Whilst the challenges to become a hub for digital innovation do exist, and solutions must be multi-faceted and sustainable, the challenges are inherent in achieving such a vision. An available workforce without an industry to work in would result in brain-drain, an industry without a workforce would limit industry progression. If Malta can meet the immediate demands and the longer-term resourcing requirements, it will be on the right path to becoming a digital hub for innovation. MDIA should work together with other Government departments and authorities to facilitate and implement such solutions.

### **3. Tara s-settur tal-innovazzjoni diġitali bhala niċċa ekonomika ġdida ghal pajjiżna? Gġalfejn u b'liema mod?**

Yes. Whilst Malta has established itself in the gaming and financial services industries, the innovative technology industry is one which Malta has recently initiated steps towards becoming - that of a hub for digital innovation. Through the registration of innovative technology arrangements, Malta is setting itself up to be an economic sector for digital innovation by instilling higher levels of assurance into registered arrangements in an industry which is longing for legal certainty. This will provide peace of mind to both users and providers of such innovative technology. Through the regulatory framework, Malta is, and should continue to attract further investment in the area of digital innovation. Digital innovation is not restricted to Blockchain and DLTs, yet should extend to other emerging technologies such as the Internet of Things and Artificial Intelligence. We are already seeing an influx of DLT operators and service providers coming to Malta. Providing assurances to other areas of digital innovation could also attract further operations and investment to Malta, which could put Malta on a path to becoming a hub for digital innovation.

### **4. Tara li għandek xi interessi professjonali jew ta' kummerċ jew akkademiċi li jistgħu ikunu konfliġġenti ma' din il-kariga tiegħek?**

No.

In regards to professional and commercial interests, the same answer follows: No. I own a company SENSEMBED LTD (bearing 100% shareholding) which provides for ticketing services for event organisers. There is no conflict of interest, since the company does not provide any services or products related to innovative technology arrangements.

There are no academic conflicts of interest. The Authority is responsible for the registration of innovative technology arrangements and service providers, and whilst it will promote education, it does not have any remit over educational and academic matters. However, this is a new industry not just for Malta but internationally, therefore it is crucial for the Authority to seek to attract input from local and international educational and academic institutions.

## *Mistoqsijiet sottomessi mill-Membri tal-Oppożizzjoni*

### **1. Tenut kont tal-pożizzjoni akkademika li qed tokkupa fl-Università ta' Malta, taħseb li ser ikollok biżżejjed hin għad-dispożizzjoni tiegħek biex taħdem f'din l-kariga?**

Yes. My role as Director for the Centre for Distributed Ledger Technologies (DLT) at the University of Malta requires that I keep up to date in respect to both international and national issues and developments pertaining to innovative technologies in both industry as well as academic settings. As director I have also proposed a multidisciplinary Masters in Blockchain and DLT (to commence as from October 2019), which will cover aspects from various disciplines including business, legal and technical areas. As the main coordinator of the programme, it is my duty to ensure that the programme is relevant to the industry (both locally and internationally) and to keep abreast of the latest developments.

Moreover, as an academic at the University of Malta I am actively working on cutting-edge research within various aspects of innovative technology and related arrangements, including smart contracts, Blockchain and DLTs, and their integration with the Internet of Things. It is crucial that the chair of the MDIA remains abreast of the advancements in innovative and emerging technology such as Blockchain, DLT, Smart Contracts and the Internet of Things. Through my position at the University I am actively undertaking such research.

Not only does my role at the University perfectly complement the role of non-executive Chair of MDIA, however, it also encourages participation in such roles.

The position will require the development of a strategy that keeps in mind current educational and industry-related matters. Through my directorship of the Centre for Distributed Ledger Technologies I am already in contact with many industry players to ensure that programmes and units facilitate and incorporate feedback in regards to the challenges they face. Thus, this is necessary to ensure that the Authority's efforts are adequate in a way that reflect the industry needs in an unbiased manner; such links with industry are crucial.

To develop such a strategy one must be aware of the technical challenges of such emerging technology, and also of related legal aspects. As an academic I have been consulted and provided substantial feedback to the proposed MDIA and innovative technology related acts - as academics we are encouraged to take part in such exercises. In developing a multidisciplinary Masters for Blockchain and DLT, I have worked (and am working) closely with legal practitioners to design legal requirements for such technology and an educational programme.

My role at the University, in fact, will not be limiting my time in respect to what is required to undertake such a position which (amongst other tasks) requires one to keep abreast of such innovative technologies, however it complements the role in that through my University duties I will be undertaking a major part of what any other chair should be doing. In addition, I have full support from the Rector to fulfil the role (if appointed) as chair of the MDIA.

### **2. Fil-Kapitolu 497 tal-Liġijiet ta' Malta hemm diversi poteri u responsabbiltajiet imwielda mill-Artikoli tlieta 3, 4 u 6, tista' tindika x'linja ser tiehu biex dawn jiġu implimentati u jekk hemmx lok ta' tibdil fihom?**

The Malta Digital Innovation Authority should instil, encourage, and, where possible, enforce values of public administration, ethics, and principles of accountability throughout its operations, whether pertaining to public, internal or international affairs as well as any other interaction with governmental bodies, national authorities or agencies.

All executive powers will be delegated to the CEO, and, therefore, to instil and ensure such values, ethics and principles, the CEO will be responsible for ensuring that staff is trained accordingly, monitored and where required, necessary disciplinary action is taken when such values, ethics or principles are not adhered to. The CEO should also instil and implement the values, ethics and principles into the Authority's processes. To remove conflicts of interest in regards to any decisions that the CEO may have to make in respect to his own performance, the CEO will be accountable to the Board of Governors.

The CEO should be the executive management position responsible for driving and implementing the operations (which the Board will oversee).

As Chairman of the Board of Governors, I will be in a position to identify and monitor areas of the authority that are drifting from upholding the mandated requirements and to put in place corrective measures to get it back on track.

One of the Board's main roles is to monitor the Authority's operations and to ensure it is upholding the required principles, values and ethics, and other guiding principles set out by the Board. In order to assist myself as Chairman and the Board of Governors to achieve this, and also to have a strong oversight, I would propose setting up an audit committee independent to the Authority's executive structure, operating directly under the Board of Governors.

The Authority should act in an impartial, courteous, efficient and objective manner, irrespective of any feature or attribute pertaining to the entity or individual with which it interacts with, and decisions made by the Authority or individuals operating within should be logged in a tamper-proof manner. For any action wherein an employee violates such principles, values or ethics, which are either raised through internal auditing and monitoring procedures, or brought to the attention of the CEO or the Board of governors will warrant internal questioning, and potentially disciplinary measures. Whilst doing so, the CEO should consider whether such a process which allowed for the violation requires any modification or further auditing and/or monitoring capabilities to ensure further instances do not occur.

Furthermore, processes should be implemented in an efficient manner, where possible utilising ICT systems and services, which allow for economical use of funds, and minimise bureaucracy.

The Authority should work with and support the Government of the day, and its institutions, departments and entities in the national interest. Where required, the Authority should also seek advice from the Minister, and/or other authorities or governmental bodies where appropriate. The Authority should work and ensure that it is working independently without interference from others where specified by law, and, similarly, follow direction as specified by law.

Staff recruitment, promotion and performance should be measured in an objective manner as possible without prejudice. The CEO will ensure that such processes are put in place through the unit handling human resources. An internal audit unit will be responsible for undertaking any monitoring, auditing and fact finding in the case of any such values, principles or code of ethics not being upheld.

**3. Hemm xi interessi kummerċjali li ghandek tiddikjara f’dan l-istadju u li huma konfliġġenti ma’ din il-pożizzjoni?**

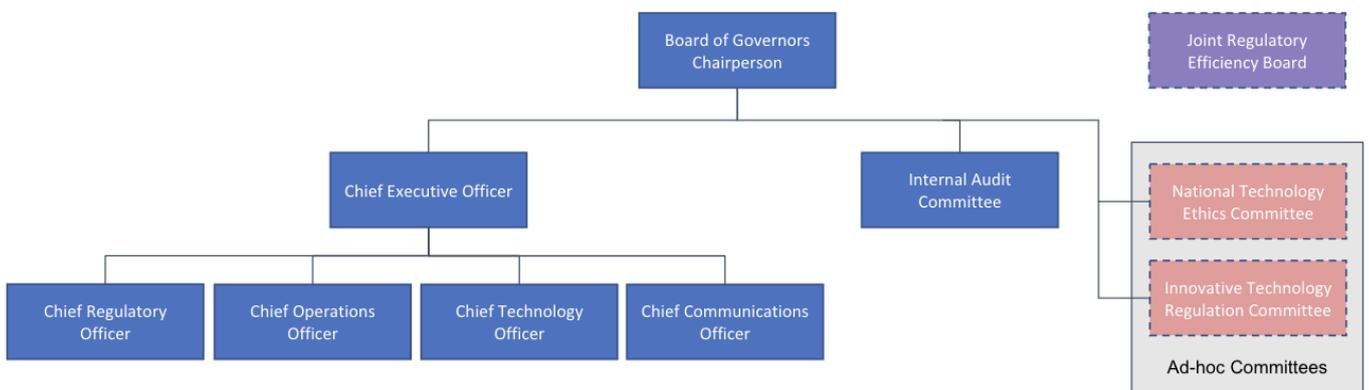
No. I own a company SENSEMBED LTD (bearing 100% shareholding) which provides for ticketing services for event organisers. There is no conflict of interest, since the company does not provide any services or products related to innovative technology arrangements.

**4. Kellek esperjenza fid-dinja tax-xoghol f’dan is-settur partikolari indipendentement minn dik li l-Università ta’ pajjiżna taghti?**

Yes. During my time in industry I worked on virtual machine design and implementation, distributed and embedded systems and other underlying concepts which are the foundations on which emerging technology like Blockchain, DLTs, Smart Contracts and the Internet of Things are built on.

**5. Tista’ tindika kif thoss li ghandu jkun organizzat l-Uffiċċju tal-Awtorità biex dak indikat mill-liġi jiġi implimentat?**

A diagram follows for illustration purposes:



The Board of Governors should lay out the MDIA strategy, which the Chief Executive Officer should be responsible for implementing, and ensuring that processes are monitored and evaluated to provide services that are efficient, up to required standards which follow the required code of ethics, public administration values, and principles of accountability. The CEO should put into place the following officers responsible for the tasks listed:

- Chief Regulatory Officer, responsible for legal matters, authorisations, compliance, enforcement, resolution, and coordination with national authorities, agencies and bodies.
- Chief Operations Officer, responsible for finance, procurement, human resources, and administration.
- Chief Technical Officer, responsible for internal technology development, information management, and on-going research and innovation.
- Chief Communications Officer, responsible for communication, promotion and marketing, external relations and education related affairs.

It should be noted that whilst a Chief Financial Officer (CFO) may eventually be required, the duties of a CFO can be initially absorbed by the Chief Operations Officer (who should still have an accounting background) with the oversight of the CEO, since the Authority’s financial planning for the first 3 years

has already been conducted by an external consultancy, and the related financial tasks in the immediate future are not deemed to require a separate financial unit. The CEO, should upon identifying that the situation has or is to change, raise the issue to the Board of Governors with a revised operation structure for immediate consideration.

To further increase assurances that the Authority and its staff are executing duties in a manner which follows the code of ethics, public administration values and principles of accountability, and to ensure that services are provided in an efficient, easy to access manner and are provided in a courteous and impartial nature, and to provide checks and balances on the operations of the Authority, an Internal Audit Committee should be set up which reports to the Board of Governors directly.

As more types of innovative technology emerge, the Authority will be responsible to undertake the necessary discussion, research and evaluation in regards to which innovative technologies should be recommended to the Minister as defined in the First Schedule of the Innovative Technology Arrangements and Services (ITAS) Act. Therefore, when the Board of Governors deems it fit to undertake an evaluation of whether an Innovative Technology should be evaluated for inclusion in the First Schedule of the ITAS Act, the Board should set up an *ad hoc* Innovative Technology Regulation Committee to undertake the task of evaluating and proposing whether such a new innovative technology should be proposed to the Board for recommendation to the Minister for consideration.

Innovative and emerging technologies, their adoption in society, and the regulation thereof, may and will raise certain ethical concerns. Therefore, the Board of Governors may decide to set up a National Technology Ethics Committee to advise the authority, and provide guidance for other authorities, in relation to ethical issues pertaining to innovative technologies, and proposed regulation of new innovative technologies and the application thereof.

The Authority should provide measures to ensure that not only its own operations are efficient, however should also cooperate with other authorities to aim towards efficiency across the board where innovative technology uses, policies and regulation are concerned. In aim of this a Joint Regulatory Efficiency Board will be established between the authorities within which the MDIA will consult and provide advice as necessary.

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