

BLOCKCHAIN FOR ON-LINE WASTE MANAGEMENT METRICS [BOWVIC]

BLOCKCHAIN FOR ON-LINE WASTE MANAGEMENT

BOWVIC – “Blockchain for On-line Waste with Volunteer Interest Credits

Using Technology (Blockchain and Biogas Digestion) with a local park ‘Waste Collective’ model to manage Waste including dog excrement more effectively and present the records of waste collected On-line to award local community credits

Participants

[Petersham Park Waste Collective \[PPWC\]](#) – dog owners concerned about Waste including dog poo and recycling management issues in their local Park – formed 2019

[Sustainability Actions Network \[SAN\]](#) – a network of local people concerned about Sustainability issues – formed 2008

[Open Interchange Consortium \[OIC\]](#) – an incorporated Australian Association of Information and Communication Technology [ICT] consultants – formed 1994

[Halisa International Network \[HIN\]](#) An International Association of Information and Communication Technology [ICT] consultants – formed 1987

[Yarra Energy Foundation](#) – provided the reports on the [City of Yarra “Closing the Poop Loop”](#) 2012/2014 project on Public response to turning dog waste into Methane and Fertiliser

Global Victory Enterprises ABN 625-974-512 – provided research and advice on Biogas Digestion systems

1. Abstract (for publication)

This Project was instigated by dog owners and walkers in a local park that were frustrated by the lack of response from their local council for managing more effectively the waste including dog excrement in their park

These Dog owners had built up a [portfolio of letters](#) and [photographs over the years](#) about the poor waste management in the Park by the Local Council

Following [research](#) into how dog excrement could be converted into Methane and Fertiliser by [Anaerobic Digestion](#), this project was established as a proposal for a Joint Venture with the local Inner West Council

This Project is relevant to the following 3 Prize Awards

b) allowing for a greater visibility of public spending and a greater transparency of administrative and production processes;

The Local Community are keen to assist the Local Council with more effective Park Waste management and Park Health Management and a possible reduction in the [new Waste levies](#) which will be passed on to Rate-Payers

c) participation in democratic decision-making by enabling accountability, rewarding of participation and/or anonymity;

It is envisaged that the local community around the Park will form networks to deal with the Waste in the Park more effectively and receive [Local Community Credits](#) to spend in the local shops

The Prototype System has been designed using the National Health Card (Medicare Card) or State Travel Card (Opal Card) as the swipe card to register contributions

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d) Enabling the development of decentralized social networks or clouds, or of decentralised platforms for the collaborative economy;

It is envisaged that each street could form an On-line Waste Community to share ideas of how to deal with different waste aspects not covered by Federal or State refund schemes such as Polystyrene, plastic milk bottles, meat trays, newspapers etc

It is envisaged that these Waste Collectives would use Electronic Tools such as [Group Support Systems \[GSS\]](#), Twitter and Facebook,

By using the RUBAC Blockchain Methodology and providing On-line Waste Management Metrics this prototype will promote On-line local businesses who accept the Local Community Credits

The Project Plan is to establish a high street consortium, similar to the [Totnes Pound eCredits](#) system, of local shops prepared to accept the On-line Credits earned by the “**Inner West Waste Warriors [IW3]**”

2. Main focus

Following a number of meetings since Jun 2018 (ref [Minutes 07 Jun 2019](#)) including meetings with an Inner West Council Councillor, this project was proposed as a [Joint-Venture with the Inner West Council of Sydney Australia on 18 Aug 2019](#)

The Joint-Venture proposed to [Council included participating in this submission](#) to the European Commission “Blockchains for Social Good” Challenge

However the Joint-Venture proposal as yet has not appeared on the Agenda for a Council meeting

As stated before, this Project is relevant to the following 3 Prize Awards

b) allowing for a greater visibility of public spending and a greater transparency of administrative and production processes;

c) participation in democratic decision-making by enabling accountability, rewarding of participation and/or anonymity;

d) Enabling the development of decentralized social networks or clouds, or of decentralised platforms for the collaborative economy;

One way of illustrating how this Project applies for those aspects is to explain the 3 aspects of this “Biogas Waste-to-Energy [w2e] Pilot project Joint-Venture:

1 12-month Local Awareness/Education Program

2 "Biogas Waste-to-Energy [W2E]" operation with input and output metrics

3 Web development to record metrics and volunteer in-kind contributions

1 12-month Local Awareness Program

The 12-month Local Awareness Program is a series of monthly meetings around Petersham Park to invite local people to a 1-hr seminar to understand how Biogas Waste-to-Energy operations works and the need for the Local Community to handle waste more effectively

People would be invited to the monthly meetings by volunteers distributing flyers door-by-door and by word-of-mouth at the [local Bowling Club](#), which is owned and operated by local Rate-payers,

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2 Biogas operation with input and output metrics

The first step is to purchase the components to establish a "Biogas Waste-to-Energy" operation

A key issue will be to have separate different types of Waste collection bins in Petersham Park

This is the [current Waste Bin layout in Petersham Park](#) while these are [4 different coloured well marked waste bins in the White Creek Valley Park](#) in the same Inner West Council area !

At the moment there are five (5) red bins at the Petersham Park entrance in the upper Station Street that connects with Brighton Street

There used to be five (5) more red bins and five (5) blue bins at Grandstand with six (6) more red bins paced around the Park

However at the week-ends the bins get filled, particularly if there is a long week-end holiday and the weather is warm

This often results in the dog-poo bags becoming strewn over the Park walkways which becomes a serious health hazard for the local children's playground, particularly in warm weather.

Hence a key aspect of this 12-month project is to monitor daily what type of waste is collected from the proposed different bins

For example [Italy, which has 9 waste containers, is the leader in Europe with a 76% recycling record](#) compared with 43% in Britain and 37% as an average for Europe

The Italian system has different coded organic plastic bags with a booklet in each household of what can be sorted in each container:

- 1 Paper - newspapers, boxes, pasta boxes and paper shopping bags
- 2 **Compostable - kitchen scraps, napkins, paper-towels, dog-poo and other compostables**
- 3 Glass bottles and containers
- 4 Plastic bottles
- 5 Light Plastic materials - glad-wrap, soft plastic
- 6 Aluminium foil, sweet wrappings and chocolate foil
- 7 Non-recyclable - toothpaste containers, baby diapers, plastic cutlery, sponges

The Italian recycle schedule can be [viewed here](#)

Collecting and utilising each one of the recycle bins could provide work for the local community while the "Biogas Waste-to-Energy" operation would use the Compostables only

Hence it is proposed that the Inner West Council provides 4 different colour bins around the Park

The PPWC is very keen to work with the Inner West Council in the design of the bins which could be similar to the can and bottle bins at Railway Stations or different colour bin such as

- 1 Green - dog poo and organic waste
- 2 Red - general garbage
- 3 Blue - cardboard and paper
- 4 Yellow - bottles, cans and plastics

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3 Web development for Biogas W2E metrics and Volunteer contributions

A key issue will be to record accurately the waste collected by different type and to monitor the compostable waste that is converted into Methane (energy) and Fertiliser

According to [P5 of the City of Yarra "Yarra Energy Foundation \[YEF\] "Closing the Poop Loop"](#) proposal dated 11 Jan 2012 each dog produces 0.34kg of faeces a day which results in 492,925 tonnes deposited annually in Australia

However there appear to be few detailed reports about the amounts of waste left in a Park as a yardstick for other Councils to use

Hence this project undertakes to produce On-line daily metrics of the amount of waste left in Petersham Park and how it can be recycled by different waste type

This requires a large number of volunteers to help manage this daily process

There have been a number of reports produced by Professor Duncan IRONSIDE to State Governments around Australia about [the value of Volunteering](#)

His report to the Victorian Government in 2012 stated that in 2006 the [value of a Volunteer hour was Au \\$ 24.09](#)

In 2001 the [OIC valued Volunteer time at Au\\$ 1 for 3 minutes](#) or Au\$ 20/hr

One Council that has been very active with Volunteers, Crypto-currencies and Blockchain is [Gladstone Regional Council in Queensland which is promoting Tourism by Bitcoin](#) and other Cryptocurrencies

In Jun 2018 [Agnes Waters Qld claimed that it was the 1st Crypto-currency town in Australia](#)

[Gladstone Regional Council has established a web-site](#) for people who want to learn how to use Blockchain, Distributed Ledger Technologies [DLT] and Crypto-currencies

This Joint-Venture with the Inner West Council is proposing to record the Volunteer contributions on a [web-site as was first established by the XML Special Interest Group](#) in 2000

3. Nature of the application

This Application is an On-line Application to allow Participants to register On-line, review their Participation Credits and monitor automated Waste metrics On-line as well

It will enable local populations to monitor the waste in local parks and how it can be re-cycled to provide Re-usable products

The example quoted above is the [Italian system which has the highest recycling record in Europe](#) and has different coded organic plastic bags with a booklet in each household of what can be sorted in each container:

- 1 Paper - newspapers, boxes, pasta boxes and paper shopping bags
- 2 **Compostable - kitchen scraps, napkins, paper-towels, dog-poo and other compostables**
- 3 Glass bottles and containers
- 4 Plastic bottles
- 5 Light Plastic materials - glad-wrap, soft plastic
- 6 Aluminium foil, sweet wrappings and chocolate foil
- 7 Non-recyclable - toothpaste containers, baby diapers, plastic cutlery, sponges

Compostable household waste in only a small part of the total household waste issue

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A key part of the application will be the 12-month education/awareness program and the ability to review topics On-line which will be regularly updated similar to these examples:

- A [Biogas Articles and Videos](#)
- B [Articles about Waste and Recycling issues](#)
- C [Examples of eCredit Systems](#)

4. Participant(s)

- A [Petersham Park Waste Collective \[PPWC\]](#) – dog owners concerned about Waste and recycling management in their local Park – formed 2019

The Petersham Park Waste Collective [PPWC] are dog-owners and local rate-payers who have been endeavouring to have more effective park waste management for many years eg [2005 Letter to Jo HOBSON](#) and [2018/19 Photographs of Park Waste](#)

- B [Sustainability Actions Network \[SAN\]](#) – a network of local people concerned about Sustainability issues – formed 2008

The Sustainability Action Network [SAN] was formed to develop projects that would assist with Sustainability issues like waste management

The SAN members have worked together on a number of projects Including:

- d [2017 UNHCR/EWB Zambia Refugee Project – using Biogas to create Energy](#)
- c [2015 Review implementation of 9 different Australian eHealth Standards](#)
- b [2011 Reviewing different “Models of Wellbeing”](#)
- a [2009 North Sydney Council 2020 Community Engagement Strategy \[CES\]](#)

- C [Open Interchange Consortium \[OIC\]](#) – an incorporated Australian Association of Information and Communication Technology [ICT] consultants – formed 1994

The OIC was formed and incorporated by Australian ICT consultants to assist/educate/raise awareness in Small, Medium and Large businesses about ICT issues through [education/awareness seminars](#), [ICT tenders](#) and [ICT projects](#)

[Founded in 1994](#) to assist Large, Medium and Small Business for understanding Electronic Technology issues through [regular lunchtime lectures](#) and [special interest groups](#)

On 23 Jul 1996 at the Annual General Meeting [AGM], OIC members gave a unanimous mandate to form an [eCredits system for Volunteers](#)

On [23 Aug 1996](#) OIC members used the “Group Support System [GSS]” provided by one of the members “**Decision Support Centres Australia**” to agree the OIC [Mission](#), [Services](#) and [Culture](#)

In 1997 while researching GSS applications, the paper from the University of Arizona [“Lessons from a dozen years of GSS research involving 4,000 projects”](#) confirmed the vast potential of GSS for project management including:

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Table 1. Lessons learned about GSS in organisations

- 1 GSS technology does not replace leadership.
- 2 GSS technology does not imply any particular leadership style.
- 3 GSS can make a well planned meeting better; and it can make a poorly planned meeting worse.
- 4 **Individuals must have incentive to contribute to group effort.**
- 5 GSS can reduce labour costs by more than 50% and project time by up to 90%.

In 1998 members developed an On-line system called OIC Y2K Resource Asset Management Program [[OIC Y2K RAMP](#)] to enable Small & Medium size Enterprises [SMEs] to provide On-line evidence for their suppliers and customers of their progress with Y2K Compliance

Once the Y2K issue had been completed the SMEs could use the RAMP system to maintain their Asset Registers On-line - this is now called “Cloud Computing”

In Jun 1999 this On-line software application [won 1st prize in the “IT for SME”](#) Category of the prestigious Global Bangemann Challenge in Stockholm Sweden where the trophy was presented by the King of Sweden

In Jul 2000 members released an [XML Tender Information Management Service \[TIMS\]](#) to provide a uniform On-line Tender systems for Australian and New Zealand Federal, State and Local Government tenders – TIMS published [over 18,000 tenders](#)

In 2001 the Federal Government Department of Employment, Workplace Relations and Small Business [DEWRSB] commissioned the OIC Local Government Interest Group [LZIG] to conduct a [series of On-line surveys with 173 NSW Local Government](#) agencies about raising Awareness of XML for On-line local Government application

OIC members established over [20 Special interest groups](#) including:

- 1 XML [XZIG] established [Mar 2000](#)
- 2 Local Government [LZIG] established [Mar 2001](#)
- 3 Open Source & Linux [OZIG] established [Jan 2004](#)
- 4 eHealth [HZIG] established [Mar 2011](#)
- 5 Cryptocurrencies & Blockchain [TZIG] established [Oct 2016](#)

In Oct 2006 the OIC was invited to speak at the [International OASIS conference](#) in Sydney about “**XML in the Government Tender Process**”

D [Halisa International Network \[HIN\]](#) An International Association of Information and Communication Technology [ICT] consultants – formed 1987

HIN was established from the contacts made after Input’87 in San Francisco and subsequent international conferences

In 1990 the British Standards Institute [BSI] DISC entered into a Joint-Venture with Halisa Europe to evaluate the RUBAC methodology for Electronic Committee Information management [ECIM]

At that time BSI had over 400 Committees with members around the world and was printing and posting over 1,000,000 (1 Million) pages of Committee Minutes each year

This joint-venture with BSI formed the [basis of ECIM](#) implemented by the Open Interchange

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Consortium [OIC]

In 1992 Halisa conducted a [research project with the Institution of Electrical Engineers \[IEE\]](#) in London for Electronic Events Registration which had over 100,000 members and held over 450 events a year

This project researched how to enable members to register and pay electronically for event attendance electronically by [Electronic Event Information Management \[EEM\]](#)

This project formed part of the [Electronic Association Information Management \[EAIM\]](#) project funded in 1997 by Ourworld Global Network [OGN], The Commonwealth Bank of Australia [CBA], AIDC and Halisa International for the Open Interchange Consortium

E [Yarra Energy Foundation](#) – provided the reports on the City of Yarra “[Closing the Poop Loop](#)” 2012/2014 project on Public response to turning Dog Poo into Methane and Fertiliser

F Global Victory Enterprises ABN 625-974-512 – provided research and advice on Biogas Digestion systems

The Project Manager for this project is Stephen GOULD who is the Partner - EII Projects HIN and the Public Officer of the OIC and SAN both of which are chaired by [Peter AXTENS LLB \(Retired\)](#)

Stephen GOULD represented the Australian Small Business Association [ASBA] on the Australia [1S/11 EDI Committee from 1987-1989](#)

The RUBAC [™] [Rational Universal Business Automation Code] coding structure was developed and owned by the Hamme Family Trust of whom [Leonard Arthur GOULD \[LAG\]](#) was the original developer

LAG worked for the British Overseas Aircraft Corporation [BOAC] as a technical development engineer

From 1963-1973 LAG represented BOAC on the [International Air Transport Association ATA 100](#) and, according to a 1971 letter from Air France, he was responsible for nominating the coding structure which was agreed by all aircraft manufacturers and airplanes for their technical manuals

In 1984 Halisa Pty Ltd undertook research funded by the Chairman Sedat TEZJAN, Technical Director Leonard GOULD and Managing Director Stephen GOULD

This [Family funding was acknowledged by Austrade London](#) in 1988

This coding structure is the basis of the XML Coding Structure for all the On-line Applications

The full RUBAC code is 32 ASCII characters in 4 sections of 8 ASCII characters

Section 1: donates the recipient code by Country and SIC Classification and each person in the organisation structure eg [Eurofighter 1992](#)

Section 2: donates the sender code by Country and SIC Classification and each person in the organisation structure

Section 3: donates the form template code which is held at sender and receiver computer systems so that only the [variable information in the form has to be sent electronically](#) in the business cycle

This section incorporates the date and time and electronic document is sent by using an ASCII code version of [ISO-8601 date and time standard](#) in the document code hence the Blockchain is automatically time and date stamped

Section 4: Barcode to identify products and the waste products, a description and the associated

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recycling process for that waste product and a quantity has to be sent with the code

5. Source code

The XML RUBAC™ coding structure is available under an Open Source Licence with a requirement to preserve the name of the authors and a copyright statement within the code, or a requirement to redistribute the licensed software only under the same license

In 1988 Alain BELLEGO United Nations Chief of Trade Facilitation and Standardization Section Economic Commission for Europe wrote to Colin HARDING of Halisa Europe about the [importance of using agreed International Standards](#) for Electronic Applications

In 1999, while the OIC was developing a standard [XML Tender template](#) for the 11 different Federal and State Government tender formats published in Australia and New Zealand, it was discovered that **both the “Australian eName & Address Standards (AS4590)” and the EDIFACT Trade Standard (ISO9735)” both allowed a simple address and a complex address in the same electronic commerce application**

Although this issue was brought to the attention of the appropriate Australian Authorities including the [Australian Computer Society \[ACS\]](#) and the [Australian Information Industry Association \[AIIA\]](#), the matter was ignored

In 2006 the OIC was invited to speak at the International Conference of the “Organisation for the Advancement of Structured Information Standards [OASIS]” on the topic [“XML in the Government Tender Process”](#)

When the [attendees at that OASIS Conference learned of the problem](#) with the simple address and complex address in the same standard they agreed on [22 Dec 2006 that only the Complex Address format of both AS4590 and ISO9735 is used at all times](#)

OIC Members subsequently developed a [Standard XML Registration Template](#) that can be used for Volunteer Registrations and Local Community Group Registrations

However the refusal of the ACS and AIIA to participate in this resolving issue have raised concerns about some of the ethics of the ICT industries governing bodies

6. Adherence to the award criteria

[please discuss in detail how your application addresses each one of the 5 award criteria specified in the Rules of Contest, providing as clear qualitative and quantitative metrics as possible, relevant for the area of activity of your application]

6.1 Positive social impact

[both potential and already achieved by the implementation of the solution (which is expected at least at a TRL71) at the closing of the submission. This can be demonstrated and quantified in different manners, depending on the specific topic addressed; one of such measures is the size of the community of users actively engaged by the actual implementation.]

There has been great interest by dog owners and others for better ways of dealing with waste including dog excrement around parks

Two examples are:

- 1 the signatures collected on Sun 30 Jun 2019 for the [“Petersham Park Waste Collective \[PPWC\]”](#)
- 2 the [Report of the positive reaction of 2,322 attendees](#) at 11 different venues of the presentation of [“Closing the Poop Loop”](#) by the Yarra Energy Foundation

In our opinion the Closing the Poop Loop project failed because it only focused on the Biogas

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conversion of Dog Excrement to methane and fertiliser and did not consider the whole issue of enhanced Park Waste management

6.2 Decentralisation and governance

[improvements in transparency and accountability (while respecting privacy and/or anonymity) in comparison to existing centralised solutions, based on multidisciplinary considerations spanning technological (i.e. computing, programming, etc.), social (i.e. sociology, psychology, art, etc.) and economic (i.e. innovation, new economic models, etc.) sciences.]

This Project methodology could be used in any park once we have determined the metrics of waste measurement over 1 full 1-year cycle

The value of having the information on-line is and automated by Blockchain processes is that local rate-payers can see the value of better waste management and how the outcomes could be used to offset their rate costs

Examples include the production of methane from the Biogas Digestion waste process from Petersham Park could be used to off-set the 24-hr CCTV surveillance of the [Petersham Park Aquatic Centre](#) or the heat and light required by the Park Café

The Volunteer Credits system can provide work and reward for the Inner West Waste Warriors as well as provide income for local shops

Each street could have its own web-site to measure the Waste collected and converted into new assets eg [converting plastic into electricity](#)

6.3 Usability and inclusiveness

[i.e. whether the proposed solution is easy to use and affordable and can engage the largest part of EU citizens, irrespective of their gender, background, financial capabilities or computer skills. This will include an assessment of both the user interfaces and the underlying principles.]

This Waste Management process can be used by any community

The web-system is designed to provide better Waste Management processes and reward the community members that wish to be involved

6.4 Viability at large scale

[cost-efficiency (including detailed considerations and metrics on energy consumption and environmental impact), scalability, security, and sustainability models.]

This is why a 12-month Pilot site is required to provide a yard-stick of how much waste including dog poo can be converted into methane and how much other waste can be redeployed into other assets

6.5 European added value

[clear added value of the demonstrated implementation for European citizens, in terms of novelty, effectiveness in comparison to existing centralised solutions, and other societal, economic or environmental aspects.]

Effective Waste Management is becoming a priority for every European citizen hence once the 12-month Pilot project has been completed we will have a benchmark for other cities to modify for their own rate-payers

In addition most city waste management do not focus on issues like dog poo or providing away for rewarding local participation by local shop-owners

Hence this is a very novel approach to involve the local community in what is a world-wide problem

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7. Publicity measures

[please briefly discuss your plans for dissemination and public or scientific communication about your application, and whether you would authorize the Commission services to disclose any additional information about your application - or if, on the other hand, there are significant parts of the proposed work which need specific security and non-disclosure measures, and the reasons for this]

Over the years the Halisa International Network has established a large list of international contacts

However the major problem we have in the dissemination of our work in this area is that the major email providers including Microsoft, Google and Yahoo block our email distribution

We have written letters of complain about this issue to many Australian Politicians including the the Hon Julie BISHOP the Australian ex Foreign Minister [re Letters re blocked emails 2018](#)

Peter AXTENS LLB (Retired) as the Legal Officer of the Sustainability Action Network [SAN] and the Open Interchange Consortium [OIC] and I as the Managing Partner of the Halisa International Network [HIN] have the authority to authorise the Commission services to disclose all the information in this submission for the Public Interest

8. Ethics

[please discuss how the applications has an exclusive focus on civil applications, and any other considerations relative to ethical aspects of the proposed activity]

1 As defined in General Annex G to Horizon 2020 Workprogramme,
https://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-ga_en.pdf Example, not to complete

This application has a focus on local government waste management issues and the desire of the local rate payers to work with the local council to accelerate the effective management of waste when the local council have been very reluctant to assist ref [Jo HOBSON letter to Council 02 May 2005](#)

However as mentioned before the issue of ethics within the Australian Computer industry has a long history of Public concern starting with the Australian EDI Standards Committee IS/11 which was hosted by Standards Australia from 1987

In 1987-1989 Standards Australia allowed the [representative from Arthur Andersen](#) on the IS/11 Committee to nominate the ANSI Standard X-12 for 2 years as an interim standard even though EDIFACT had been published as the ISO-9735 Standard in Apr 1987

On 20 Jul 1993 Arthur Andersen Consulting hosted a New World Order luncheon called [“Inventing the Australian Model of Government”](#) with a presentation by Gary STURGESS who was at that time the NSW Premier Nick GREINER’s Chief of Staff called “Virtual Government Presentation”

On 22 Jul 1997 Stewart FIST wrote an article about Standards Australia [“Standards compromised By self Interest, lack of scrutiny”](#)

On [05 Feb 2002 Mark BEZINNA Director of Standards Australia chaired an ebXML](#) working group established to assist Small and Medium-size Enterprises [SMEs] implement ebXML Applications

In 2003 Standards Australia established Standards Australia International [SAI] Global to sell Australian Standards around the world

In [Dec 2003 SAI Global was floated on the Stock Exchange](#)

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In [2016 SAI Global](#) was purchased by Baring Private Equity

On [12 Dec 2003 Standards Australian](#) received a Federal Government Grant to lead a consortium to develop an Invoicing system called “BizDex” for the Australian Wheat Board for grain exports

According to a [presentation at the UBL Plenary in Hong Kong on 10 May 2004](#) that Consortium IBM, Microsoft, SAP, Sun Microsystems EAN and two small Australian companies “Red Wahoo” with Managing Director Steve CAPELL and “TEDIS” with Managing Director Tim McGRATH

In Dec 2004 Red Wahoo claimed it was the author of the [Australian Government Name and Address XML Standard AS4590](#), Chair of UN/CEFACT working group and a Chair of the OASIS ebXML Business Process

In 2005 it was discovered that the [BizDex system allowed the AMB to pay over \\$ 300 Million](#) in kickbacks to Iraqi officials

In 2005 Red Wahoo published that is have been working with the Australian Government on many Contracts including [GovDex and other Projects including a Standard Business Reporting \[SBR\] System](#)

In 2005 the National eHealth Transition Authority [NEHTA] was established to assist the Australian Health industry transition to eHealth

In 2006 NEHTA issued a Management Framework [“The Nature and Importance of Standards”](#) and then published [9 different Candidate Standards for eHealth applications](#) !

One of which was EDIFACT and the other 8 were owned by overseas organisations each of which has a different Name and Address format !!

In 2006 at the OASIS Conference in Sydney attendees at that conference confirmed by a Group Systems Support [GSS] process that the [complex address format of both AS4590 and EDIFACT ISO-9735 should be used at all times](#) for eBusiness applications

In Jun 2008 Steve CAPELL as the Chair of the UN/CEFACT Working Group gave a presentation to SEMIC Brussels about [“E-Government Interoperability Framework – an Australian Perspective”](#)

On 31 Oct 2009 [Standards Australia announced it had a new business model](#) whereby some standard would be allocated to individuals/companies who would then receive Royalties

On 09 Jun 2016 the AFR prints article [“Fund Manager punts on SAI Global as stoush worsens”](#)

On [01 Jul 2016 SAI Global purchases the NSW Government Land and Property Information \[LPI\]](#) which holds all details of Land ownership

In Jul 2018 [IBM signed 5-year Whole of Government \[WoG\] Au \\$ 1 Billion contract](#) for **Blockchain**, Artificial Intelligence and Quantum Computing

It now appears that virtually every organisation involved with “Blockchain” is a member of [Hyperledger](#)

On 09 Sep 2018 the Australian Financial Review [AFR] announced that [Standards Australia is chairing the ISO Standards group developing standards for Blockchain](#) and distributed ledgers

Stephen GOULD
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Peter AXTENS LLB (Retired)
Legal Officer