

# KEY PERFORMANCE

## HIGHLIGHTS

FINANCIAL YEAR 1

2020 - 2021 UPDATE



INVESTING IN  
CAPABILITY





# CEO UPDATE



Smart Footprints digital & IT consulting and advisory services started operating on October 19, 2020. Encouragement from Education, Research and Local Government sectors, Smart Cities Standards and Entrepreneur communities helped make this a reality.

**"On the shoulders of giants we independently create data and sensor network solutions to meet and exceed smart sustainable service expectations."**

We wish to thank Edith Cowan University, AARNet Pty Ltd, The Frame Group, UNSW, and formal partners Respiro, Synneph and Meaningware for their advice, business and support. Renovatio Consulting have been active supporter of our plans to create Smart City data-driven solutions that we are developing together,

This financial year we have reviewed campus networks, identified use cases, architected and designed solutions and helped shortlist and select suppliers.

We have volunteered time on IEC Smart Cities Systems Standards Development, helping contribute and shape best practices on city administration systems and practices.

Our services have grown during the year to include

- Network Architecture and Design
- Network Cybersecurity
- AI Information Security
- Network Engineering services
- Network Monitoring & Managed Services.
- Sensor networks-as-a-service

We spent 65% of our time on research, consulting and volunteering, with the remaining 35% on business setup, service development, presales and administration.

Our CO2 impact was 4.67 tonnes, our personal (family) offset was 15.18 tonnes, Both have been offset this year with plans to become accredited as Carbon Negative and as a "Corporate-B" accredited organisation next financial year.

We continue to engage with universities, state and local government and private businesses on the economic and environmental benefits of combining infrastructure, data, and sustainable practices for resilient, productive and livable places of the future.

For 2022-23 we seek to grow our share of network services and smart place IT readiness practices, and pilot IoT and Virtual CIO services.

Despite the challenges of the pandemic, we are grateful to be able to work with virtual teams and appreciate your continued support during these challenging times.

James Sankar  
CEO, Consultant

Irene Sankar  
Executive Director

# SET UP & GROW

All aspects of business planning, formation, legal, banking, accounting, insurance, backend systems, brand, trademarks, website, content and service catalogue, partnership development and presales activities

54

Build &  
Operate  
Days

26

Research &  
Development  
Days

## RESEARCH

Extensive market and technical research in data network virtualisation and automation, smart and sustainable systems and technologies and impacts on cities and places and on staff development

## CONSULTING

Delivered time & materials and fixed time engagements for customers located in NSW and virtually to WA

70

Actual  
Consulting  
Days

20

days actively  
participating in smart  
sustainable cities  
standards  
development

## PRO BONO

Active Smart Cities Standards experts, chairing a National Smart City Systems Committee for Standards Australia, reviewing and contributing to IEC, ISO and ITU-T international standards and specifically the Australian adoption of IEC Smart City Systems standards

# RESEARCH

# 26

Research & Service Development Days

We attained Smart Cities Practitioner accreditation in Feb 2021 and successfully completed a standards convenor training course later that year.

We presented to an IEC International Forum, to The Australian Smart Communities Association board, and to a consortium of Victorian Councils.

We participated in IoT, Local Government, Industry online conferences and ACS Masterclasses.

In early 2021 we announced a new smart place readiness assessment framework combining IEC, ISO and ITU-T best practices to independently verify local council capability and establish steps to further develop to take advantage of data, digital processes and service delivery.



## Smart Place Maturity Model



Leadership and Governance	Stakeholder Engagement and Citizen Focus	IT/OT/IOT Integrated Technology	Infrastructure Resiliency & Security	Data & Insights	Existing Levels of Smartness	Environmental Sustainability
<p>The ability of the smart city to engage its citizens, community organizations and businesses in the process of making the city smarter.</p> <p>Effective smart city leadership is about ensuring that the smart city is built around</p> <ul style="list-style-type: none"> <li>the citizen and their needs and aspirations</li> <li>supporting &amp; working with initiatives to make the city smarter that come from community organizations and businesses.</li> </ul>	<p>The quality of leadership and smart place execution is critical in order to progress from good intentions to measurable outcomes.</p> <p>Skills and leadership in</p> <ul style="list-style-type: none"> <li>setting bold and achievable goals</li> <li>paring with the right governance &amp; execution</li> <li>aligning to entire set of stakeholder organizations needed to drive many of the smart city outcomes.</li> </ul>	<p>A well-designed and properly integrated ICT Infrastructure is the critical enabling factor of the Place's transformation from Silos to Hyper-Connected communities.</p> <p>This can ensure</p> <ul style="list-style-type: none"> <li>secure and regulated sharing of the information</li> <li>support in the delivery of high quality services</li> <li>Services are delivered to the right stakeholders</li> <li>Services meet business demand</li> </ul>	<p>A well-designed and properly integrated Infrastructure is the critical enabling the digital services that deliver smart city platforms and systems across the entire value chain.</p> <p>The infrastructure meet the strategic needs of both corporate and IT strategies</p> <p>High availability of connectivity, data, digital services for purpose</p> <p>Resiliency should one of more paths fail due to an outage or congestion</p> <p>Services are standardised and automated to optimise responsiveness and keep costs low</p>	<p>A smart city's ability to use data effectively to enable transformational change in the way that the city works.</p> <p>Data needs to be pro-actively shared with whoever can use it to make the city work.</p> <p>Provided in standards-based format for easy aggregation of data from different sources.</p> <p>Analysed effectively to allow better decisions to be made both for real time management of city systems and also for long term planning.</p> <p>Benefits can only be realized if the city has effective measures in place to ensure the security of all sensitive data and to manage all personal data responsibly.</p>	<p>A smart city has assessed current implemented smart initiatives to build on its successes and tackle areas of greatest weakness.</p> <p>Smart city initiatives involve the gathering, analysis and use of data.</p> <p>Smart city leaders assess smartness in a city from various perspectives to see how far the use of data is already adding transformational value.</p> <p>Assessment allow the city to understand how far the greater availability of data and the ability to analyse much greater quantities of data in near real time is already enabling each of these areas of city life to be managed much more effectively.</p>	<p>Leaders can assess the complex inter-relationships and impacts that exist whether managing the status quo or leading change that affect the environment.</p> <p>Procurement methods prefer environmental low – zero or negative impact solutions</p> <p>The smart city has a range of sensors, platforms, measures and controls to measure and mitigate environmental impact</p> <p>The smart city value chain is defined and measured to limit impact across the entire lifecycle.</p> <p>Mitigation and reduction of impact measures invest in solutions that can derive multiples of recovery outcomes over time through a program of active restoration.</p>



# CONSULTING

# 70

Actual  
Consulting  
Days

We were grateful to support university customers with their network refresh and transformations goals by

Identifying and documenting IT use cases that data networks supported or enabled.

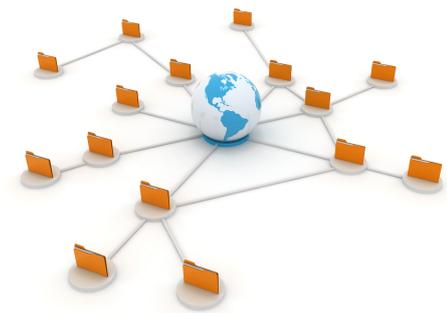
Translating use cases into common and bespoke requirements for requests for information.

Analysing market capability with needs to vendor agnostic architecture and design guides (LAN/WAN wired/wireless, cloud interconnect) solutions that were

1. Robust and high performing;
2. Agile and scalable for service management;
3. Secure and resilient;
4. Competitive in various multi vendor modes; and
5. Cost-effective.

We became a trusted independent advisor and panel member on network procurement exercises and have created and analysed supplier responses for compliance and verified quoted bill of materials as fit for purpose and calculated total lifetime costs.

We also developed a readiness assessment framework for campuses, communities and cities to become smarter in the use of integrated IT to lower costs, improve service delivery and be more environmentally sustainable.



We have advised Local Government communities on smart city standards and on opportunities to combine IoT, data and business processes for new insights, more responsive services and lower-cost outcomes.

# PRO BONO



# 20

days actively participating in smart sustainable cities standards development

Smart Footprints chaired Standards Australia's National Committee on Smart City Systems Standards to

- Review, contribute to and adopt International Standards.
- Support international work on strategy, city response to pandemic workshop design and a technology observatory concept.

In 2021 alone, we have participated in 11 national meetings and 15 international IEC meetings.

We have promoted standards work to IEC international groups and Australian Local Councils and Communities.

We are also members of The Australian Smart Communities Association.

We also donate volunteer time helping to cook OzHarvest and ScondBite food for Dignity a charity that shelters and feeds the homeless.



Smart Cities Reference Group launch and first meeting in May 2019, to initiate the development of the Smart Cities Roadmap (Source: Standards Australia)





# CARBON IMPACT ANALYSIS

Smart Footprints direct carbon footprint calculation\* (excluding the emissions of producing IT equipment) was 4.67 CO2 tonnes. As joint owners of the family business, we calculated our household emissions to be 15.18 CO2 tonnes, 19.84 CO2 tonnes in total for an entire 12 month period including time prior to the establishment of Smart Footprints.

**Food and Waste [8.57 CO2 Tonnes]** was the highest emitter, this covered the cost to produce, transport food and drinks and dispose of waste; it included garden waste that also decomposes releasing CO2, this category excluded the fruit and vegetables grown at home and the traditional and worm composting to support it whilst also reducing food waste.

**Utilities [6.95 CO2 Tonnes]** this was largely Fibre-to-the-home/Wi-Fi and 4G mobile usage across all household members working from home and home schooling over zoom with access to other digital content and services.

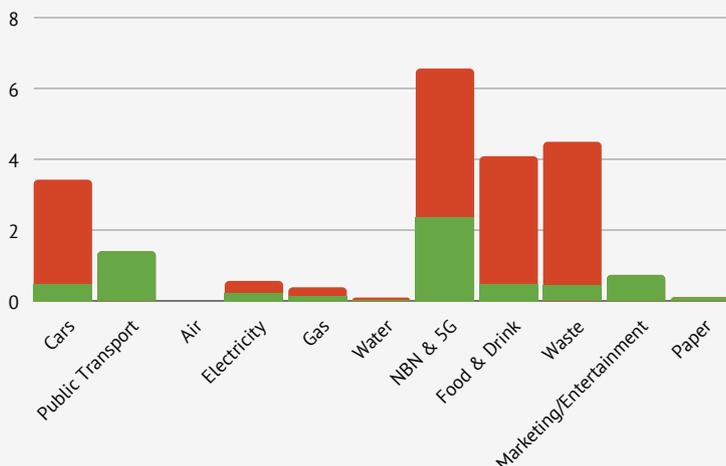
**Travel [3.56 CO2 Tonnes]** included an interstate trip to Victoria to meet partners, 20 trips to Chatswood and Sydney CBD by bus, train and local car use of 15,000kms with two cars.

The total emissions are higher than Australia's 16.31 average (2019)\*\* and may have been due to more at home costs from COVID-19 restrictions, and is approx. four times the global 4.8 average (2017)\*\*

\* Calculations made on [www.carbonneutral.com.au](http://www.carbonneutral.com.au)

\*\* <https://ourworldindata.org/per-capita-co2>

## CARBON IMPACT



This graph shows our company CO2 impact (green) and personal CO2 impact (orange). Energy costs were low due to solar panels and Tesla batteries reducing reliance on the grid.

## CARBON OFFSETS



A donation to plant trees in Australia to offset 20 tonnes of carbon emissions was purchased on 5 August 2021



# 2021-2023 Plan

## INVEST FOR GROWTH

Our Plans for 2021-2023 are to continue to invest for growth in our research and advisory practice and in a broader range of products and services.

### Universities

- We will continue to offer independent local, wide area and cloud network service reviews, designs and go to market support.
- We will invest in "proof of value" Internet of Things (IoT) and data analytics platform services tailored to support Smart Campus needs.

### Local Government

- We will conduct smart place readiness assessments.
- We will track and analyse the impact of current and emerging Information technologies on smart cities systems.
- We will invest in "proof of value" Internet of Things (IoT) and data analytics platform services tailored to monitor and predict climate change impact on cities and the effectiveness of current and planned adaptation measures.

### Private Sector

- We will develop a virtual CIO service for SMEs to have affordable access to IT management and technical expertise to optimize performance and cost, adopt IT security best practices and measure carbon emission impacts and e-waste.

## WHAT WE DO



### SMART PLACES

We can create or implement smart place plans.  
We can review, design, procure, operate & managed services.  
We specialise in complex digital infrastructure, data platforms and services at scale in optimal, secure cost effective ways.



### INTERNET OF THINGS

We capture multi-vendor IOT platform data to sense and understand environments.  
We apply relevant policy, viable operating models and secure scalable services to enterprises, campuses, precincts, communities and cities solutions.



### DATA

We host a unique data analytics platform  
Multi-tenant flexible and user friendly  
Queries and correlates business, public accessible, sensor & spatial data sources.  
Identifies trends, correlations & predictions at scale.  
Supports valuable insights for decision making.



### DATA NETWORKS

Data Networks are critical for data movement.  
We deliver resilient, secure, agile Network Automation solutions  
We have specific Information and Operational Network Security services.  
Network Monitor and Management services available.



### MISSION

Solve global challenges at the city and places level.

Our unique consulting practice and data driven "system of systems" platform informs and supports organisational resourcefulness, resiliency, productivity and environmental sustainability.

We do so to proactively nurture, protect and sustain our planet for future generations.



### VISION

To cultivate data into insights that accelerate competitive advantage and environmental sustainability.

We do so by utilising world class Infrastructure, Systems, Diverse Multi-Generational Talent & Quality Processes.



### WHY IT WORKS

We combine current and emerging sensors, platforms, data and processes.

We source talent via our agile partner ecosystem.

We will adopt a "protopian approach" to expand our understanding and impact.