

IPPS

Sharing Plant Production Knowledge Globally

the Propagator



International Plant
Propagators' Society

<http://aus.ipps.org/>

Australian Region - Newsletter Winter 2020 - No: 65

Stability from Flexibility

Change is the only constant in life. Ones ability to adapt to those changes will determine your success in life.

- Benjamin Franklin

A great bit of wisdom, especially for our times where we are experiencing a "twist" period. We have all had to make many changes already and adapt this year to a new living and working environment, some even call this the new normal.

From some discussions it has also been a busy period for most growers with people at home wanting plants for their home gardens. "Social distancing" has mainly meant moving people a bit further away on the propagation bench or ensuring enough space in tissue culture facilities, or even keeping at least a few arm lengths away from colleagues in growing areas.

You may not realise it but the rules in Australia have been very different to other countries, and we have benefited from being classified as part of an essential industry. It has been good to have been kept busy. Colleagues in New Zealand experienced a total lockdown, and have only just been able to get back to their nurseries, and in the UK it has been reported that hundreds of millions of plants have been dumped. Due to cuts in international flights, cut flower growers and florists here have also been very busy as well.

On the whole we have not had to quarantine ourselves at home wondering what comes next as many have. Instead we have stuck to it adapting to changes as necessary for the business to continue. As the picture on the page shows we change our methods to get the

best result for what we are trying to do - "Be stubborn about your goals, and flexible about your methods."

Our Australian Region board have had to make some drastic decisions this year as they have adapted; postponing this years conference in Geelong to 2021, trialling meeting by video-conferencing (ZOOM app.), and complying with constitution and regulatory requirements by organising an **AGM** where members can be present by way of their device online ([see page 4 for details as you will need to register and get email confirmation](#)). Other regions of IPPS have also had to make similar adaptations to the way things have traditionally been done.

Looking forward to catching up via Zoom at the end of May, and in person in Geelong in 2021.

Bruce Higgs



THIS EDITION
Stability from Flexibility
Letter to members
AGM 30 May 2020

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President's Report

Wow what an interesting 12 months we have experienced. From starting in tropical Port Douglas early May, and then getting the full dosage of nature (drought, sand storms, fire and then floods) and to top it off Covid 19, ending up wondering when we can get back to normality ... (if there is such a balance).



The International meeting held at Twin Waters on the Queensland Sunshine Coast was a great success and full credit should go to Clive and Di Larkman and Pam for organizing such a great preconference tour, Ray Doherty continued the success with a well-balanced and interesting conference, the attendance gave Australian members a great opportunity to meet International visitors from New Zealand, United Kingdom, the Americas, South Africa and India.

Conferences are not only a source of information but a great chance of networking as we only get together generally once a year and of course the unexpected happened and all of David and Di Daly's planning and chasing has come unstuck, through no fault of their own.

During the year your board had 2 phone hookups and a lot of the discussion was generally around conferences upcoming, we have at this point in time postponed the Geelong meeting until 2021, the exact dates are yet to be confirmed with Novotel, but definitely in May.

I would like to thank all the board members for their input during the year. We are living in uncharted waters, so be prepared to accept changes and stay healthy.

Cheers

Tony Vander Staay

Executive Officer's Report

IPPS Office

Well who would've thought this time last year that we would be experiencing COVID19 this year which has put a halt on our lives as we know as 'normal'. I have still been kept busy with 'day-to-day' running of the IPPS Office as well as following up on membership subscription renewals.



IPPS Australian Region Board for 2019 - 2020

Tony Vander Staay tvanders@westlandnurses.com.au **President**

David Daly david@conifer.com.au **1st Vice President**

Jacqueline Jenkins jacqueline.jenkins@cit.edu.au **2nd Vice Pres.**

John Messina johnmessina30@gmail.com **International Director**

James Burnett jab342000@gmail.com **Treasurer**

Ray Doherty ray@azaleagroove.com.au **Awards Committee**

Puthiyarambil Josekutty josekutty964@gmail.com **Area Meetings**

Neroli Forster neroli@seedshed.com.au

David Hancock david@naturalarea.com.au

Dermot Molloy Dermot.molloy@rbg.vic.gov.au

Peter Waugh peterwaugh1841@gmail.com

Clive Larkman larkman@larkmannurseries.com.au **Editor /Historian**

Pam Berryman (07) 38299767 pam@ipps.org.au **CEO**

Membership Subscription Renewal 2020

Australian Region is still managing membership subscription renewals.

If you have not received your Membership Renewal Notice, please contact me ... pam@ipps.org.au

If Members are still experiencing issues whilst trying to renew their membership via the new International website, please let me know. For those Members who prefer to pay via credit card or EFT facility please contact me. *If you are having difficulty in paying your subscription please contact me so that we can look at the various options available for split payments.*



BANK DETAILS: Bendigo Bank BSB: 633-000

Account No: 140185737

If paying by EFT PLEASE PUT INVOICE NO. OR NAME IN THE PAYMENT BOX SO I CAN IDENTIFY WHO PAYMENT IS FROM. THANK YOU

Contact Detail Changes

To ensure Office records are kept 'up to date' I would appreciate it if Members could please notify me of any changed contact details. In particular, if you have changed telephone provider recently, please advise me of your new email address at pam@ipps.org.au

It is important that the Australian & International database records are kept 'up to date', otherwise you could be missing out on receiving information.

IPPS Pre-Conference Tour & 48th Annual Conference 2020, has been postponed to 2021

Pam Berryman

International Directors Report

Since the last newsletter went out the world has gone into a holding pattern. From the societies perspective, meetings and travel have had to be cancelled, but the progression of our mission - to seek and share - goes on.

A summary of meetings in this time of COVID-19 is as follows:



- Southern African Region: Their annual conference went ahead before the time of lock down. By all accounts it was a successful meeting.

- New Zealand Region: Their conference was due to happen in Invercargill right as the travel restrictions were being introduced. The region decided to cancel the conference. Plans are still underway to hold next years conference in Hamilton.

- Australian Region: As you know by now, we have postponed the Geelong conference until next year.

- Western Region: Their meeting, which is also the International Tour for this year, was due to start in Vancouver, Canada on June 13th. It would have completed with the conference in Bellingham, USA two weeks later. The tour and meeting have been postponed until next year. It will happen in the same venues at approximately the same time in June 2021.

- Eastern Region: The region has decided to cancel their conference in Hamilton, Ontario Canada which was scheduled for September. With the benefit of more time to plan an adjustment, the region has come up with some great alternatives to meeting in person. Plans are underway for online presentation of technical information sessions. Virtual tours of businesses are also being looked at. The 2021 conference in Chicago is still planned to go ahead. The Hamilton conference has been moved to 2023.

Other regions with conferences planned after September are watching the situation. Different governments are looking at lifting restrictions at different times and in differing ways, so there can not be a single approach to the arrangements of ongoing meetings.

Whilst it's a difficult time for all right now, the core value of IPPS worldwide will continue to hold strong. Sharing and learning within our group of members, past, present and future, are why we are all here. We can all look forward to eventually meeting together again as we have done in the past. And the initiatives that come from this challenge will continue to develop into the future, allowing us to virtually tour businesses and

gardens that would otherwise be too small or impractical to visit as a large group, or too remote to otherwise be feasible. Regions need not be limited to their own geographical boundaries when joint events can happen online. Our seeking and sharing will go on better than ever.

We will be kept informed as changes happen. Keep watching the IPPS Facebook page for updates, and stay safe.

John Messina

Presidents Letter to members of IPPS (Australian region) May 2020

Hello fellow members,

By now you all would be aware that our proposed conference in Geelong has been postponed, the society has been in discussion with the Novotel Hotel about changing our timeline. At this stage we have tentatively rebooked for May 21, we are of course aware of possible future travel restrictions, and everybody's general health.

David & Di Daly have stepped back from organising next years conference at this point of time. David Hancock and Dermot Molloy have stepped into the breach and will be taking over from David and Di. Subject to speakers agreeing to be involved next year, the program should not change too greatly from the original script. I have spoken with all our sponsors to date, and they all remain supportive of the Society.

We have also considered the implications of future conferences, initially it was planned to go to Canberra in 2021 and then Leura the following year to celebrate our 50th year of the Society being established in Australia. The board has considered this situation and decided that we would skip Canberra and aim for Leura in 2022. I wish to thank Jacqueline Jenkins for her effort to date in starting the organising of Canberra. Bruce Higgs is now setting up plans for Blue Mountains / Leura.

The International meeting in Vancouver/ Bellingham N.Y. has also been postponed, and at this stage it is proposed to run a year later, all regional meetings this year have been postponed, what format will the future bring will be interesting. I have been lucky enough to have attended five internationals over the past few years, and each have exposed me to different cultures, different business techniques and propagation methods, plus made an extensive range of contacts. Oh for a crystal ball!!!!

Our constitution requires that 'an AGM is to be held within five months of the end of the Societies financial year (being December), at which meeting a minimum of 30 financial members are to be present.' This year we intend to use video-conferencing for those present online.

Given the unprecedented issues that have arisen with Covid 19 and Government recommended and declared controls on travel and meetings, and the duty of care to members, the IPPS Board has taken the view that it is valid for the Society to

dispense with the requirements of the Constitution for the 2020 AGM on the basis that the requirements cannot be delivered due to the legal doctrine of contractual impossibility in the relationship between the Board Members and the membership of the Society.

Therefore, to ensure that otherwise the functions and responsibilities of the Society can continue, the Board Members have offered themselves to continue in the roles in a caretaker capacity for the 2020/2021 year, subject to the support of a majority of the membership attending the teleconference AGM.

This advice effectively seeks the acquiescence of the membership to this end and for the 2020 / 2021 year only and on the understanding that formal ratification will be sought at the next AGM. The Board is mindful of not making other than the normal and usual course of business decisions over this time.

Whilst seeking the support of members to this decision, the Board would welcome a response from members who have objections or concerns.

Tony Vander Staay

President IPPS (Australian Region)

IPPS Australian Region AGM

Saturday 30th May 2020

Dear Member,

This year, due to COVID 19 we are holding our Annual General Meeting on:

Saturday 30th May 2020 @ 4.00

p.m., via Zoom, a free easy to use web conferencing app.

We do hope you can join us. We anticipate it will take about 30 minutes.

USING ZOOM

Zoom is a free, easy to use video-conferencing app.

Registering for the AGM

To participate in the AGM, you will need to register. Please register by sending an email to the Executive Officer – Pam Berryman – pam@ipps.org.au as soon as possible so we can ensure we have the numbers for a quorum. When you register please advise your preferred method for joining the ZOOM meeting - EMAIL or MOBILE PHONE. Please send through your email/mobile phone details so that I can confirm they are the same that I have in the IPPS members database. This will ensure that you receive the Zoom link.

You are invited to a Zoom meeting.

When: Saturday May 30, 2020 – 4.00 PM AEST

James Burnett will send a link to those Members who have pre-registered on Friday 29th May

How the meeting will work:

- From 4.00 p.m. on 30 May, the Zoom meeting will be open. Simply click on the Zoom link sent after you registered, using your computer, iPad, or mobile phone.
- James Burnett, the Zoom host, will accept everyone as they join and you will be able to see everyone on your screen. This may take a minute or so.
- If you already use Zoom, just click on the link to join the meeting.
- If this is your first time for Zoom, when you click on the link, you will be asked to download and launch the Zoom software. **We highly recommend that you download Zoom at least a day before the meeting and practise with a friend or family member.** <https://zoom.us/download>

The AGM format:

- At 4 p.m., Tony VanderStaay, the President, will declare the meeting open. James will mute participants to block out background noise.
- To vote on resolutions, James will unmute everyone, and ask for those in favour, those against, those abstaining. We'll ask you to please respond at these times.
- Pam Berryman will be the Returning Officer and conduct the voting for office bearer positions.
- There will be an opportunity for questions - we will use the Chat functionality for questions.

Help:

The following YouTube link is an excellent introduction to Zoom if you'd like to get more familiar with it.

www.youtube.com/watch?v=xFbWLuOn7Iw

If you have any questions, please contact one of us.

- Tony VanderStaay, President, tvanders@westlandnurseries.com.au
Mobile: 0409 541 247
- James Burnett, Treasurer, jab342000@gmail.co
Mobile: 0437 636 841
- Pam Berryman, Executive Officer, pam@ipps.org.a
Mobile: 0412993386

Our Directors Thoughts

We thought it would be a good idea at this time for you to know a bit more about some of our directors and their hopes for IPPS into the future.

They were asked for a brief description of their work and a response to these questions.

• *How have you coped with the effect of drought, floods, cyclones, fires and Covid 19 over the last 9 months?*

• *It is likely that things will now change into the future, how should IPPS change to meet the challenges this presents us into the future, so that the society continues to be of value to horticulture and horticulturists?*



Profile **Tony and Rosemaree**,

Owners and propagator of Westland nurseries Tasmania

The Vander Staays have been involved in IPPS since inception in Australia in 1973. My father Henry attended the first meeting with my new bride Rosemaree, we had met at Burnley Horticultural college in 1969, where we were the only two Tasmanian students in the whole college. Rosemaree grew up on the North West coast of Tasmania, while I got transported from Holland in 1950.

Rosemaree is the plant lover while I managed to get the plants into the pots and tried to sell them. When we joined Pop and Mum in the business in 1972 they were growing bedding plants, and house plants, with a major crop of Tuberous begonias which we packaged for Woolworths in those days. They had one full time staff member and 4-5 casuals to help with the pricking out and potting up. When I joined the business the full time staff member retired on the basis that he thought the business was not big enough to support more staff.

Over the years I have found that there are trends in the industry, but being flexible enabled us to grow at a fairly consistent rate. Tasmania this past few months have had a minor touch of drought with some limited water restrictions in place (having very little effect on sales). We had no big fires as the previous year, but have been

caught up in the Covid 19 pandemic. We have seen a very big increase in demand from those outlets that have been able to be flexible by using online sales, click and pick up, plus offering delivery services to their clients.

My two sons are pushing us into using more and more high tech systems in the business, and we are constantly updating our computer systems and programs.

I feel that while the existing restrictions are in place most of us will be cautious for the next year or so, if and when we get a suitable vaccine, then as a whole society we will go back to face to face meetings, and networking, holidaying and heavens forbid go cruising again. But I would say the next two possibly three years we all will be conscious of what's happening now, human memories are short term and it won't be long before it's just another piece of history. The financial crush will be a far bigger fallout than the actual bug.

I think the society will need to keep in touch by electronic means and we should be trying to get more smaller local get togethers, to keep people in touch.

As an industry I think we couldn't be in a better position, the future of horticulture will continue to be better appreciated, with more of the work force working from home. This will continue, people will want to bring nature inside and around them, we will not be able to get enough plants to meet demand.

John Messina, Botanica Nurseries, Sydney.

Of all those recent challenges, drought would be the one that was looming as the worst. Our dam was down to little more than ankle deep toward the end of Spring last year. We had steadily been reducing capacity up to that point, offloading as much growing to other sites as we could to limit water consumption. There was little other option in the end than to sink a bore, which proved a saviour when the bushfires came through in summer. The strong winds caused some havoc with plastic growing houses, and while the fire didn't make it on to the property, there were plenty of showers of embers and choking smoke that kept us all feeling pretty nervous!

The current Covid-19 situation is something that, like everyone, we have had to adapt to, and continue to adapt to as the situation changes. There is a strong sense



among everyone on site, of doing the right thing by each other. As yet, we have done well to keep safe. But since so little can be predicted about where this whole situation is headed, all we can do is continue to be vigilant.

While it's almost a given now that the future will change, I'm sure the need to share experience, knowledge and passion for what we do will still be present. Indeed more so than ever. I'm genuinely sad that we won't be able to meet in person this year for our annual conference. Not just for the work that had gone into planning it. It's the one time of year that we get to do the 'face to face' sharing with our biggest group of members together. But the AGM will need to go ahead, and it's a bit exciting to tread new ground by having our first virtual online meeting in order to achieve that. It will break some new ground as to how we can meet more often in the future.

Dermot Molloy

My name is Dermot Molloy and I am the propagator at The Royal Botanic Gardens Victoria. My role involves growing plants for all horticulturists at the gardens and doing revegetation contracts for the Victorian Government.



The gardens have been closed for 5 weeks now and all horticultural staff are still on-site. Covid 19 restrictions have made all of us work differently but we are doing well.

IPPS is changing and I think this will involve an increased online presence to attract a younger audience. These platforms will hopefully be the go-to place for plant production knowledge for professional horticulturists. Sponsors could then provide support for a youth membership program. The society must address the perennial challenge of dwindling membership. I say let us give this our support by providing expert propagation information that our current and future members need online.

Dr Puthiyaparambil Josekutty M Sc, Ph D (Jose), Research Manager, Skybury Farms, QLD 4880 (www.skybury.com.au) is an Agriculture Biotechnologist with over 30 years of work experience internationally covering Australia, USA, New Zealand, Micronesia, South Africa and India.

Skybury Farm with Red papaya trees

Skybury farm is a diversified, progressive and technology intensive agriculture business. Skybury produces and markets the best quality RED PAPAYA and COFFEE. My research focus is quality improvement of papaya through accelerated in vitro breeding as well



as conventional plant breeding. Before joining the Skybury in 2017, I served at Fleming's nursery (www.flemings.com.au) – 2015-17- and Yuruga Nursery, (www.yuruga.com.au)-2012-15- as their Plant Tissue Culture Facility Manager developing and managing plant propagation research and plant production in-vitro.

We have been fortunate in the Far North Queensland in 2019 -2020 with no major cyclones or other weather events related to the **Global Warming** and related **Climate Changes that affected** much of Australia.

COVID 19 did not seriously affect the health system in the Cairns region, although it has a devastating effect on the heavily tourism dependent economy of the region. As an Agriculture business employing up to 100 people, including many seasonal and migrant workers, Skybury farms implemented several critical measures to successfully defend the initial wave of COVID 19 as cited below.

1. Retained the staff who were with Skybury from the beginning of 2020 and didn't hire new people to avoid potential introduction of COVID through new recruits.
2. Mandatory 14 day quarantine was introduced at the company for any employee including the Skybury family members who travelled internationally or to hotspots within Australia.
3. **Staff education:** All the staff were made aware of the COVID19 pandemic and potential impacts of the virus infection.
4. **Sanitation** facilities with hand soap and alcohol based sanitiser were set up at every unit of the business.
5. **Staggered shift work** was introduced to achieve required social distancing especially to help the large picking and packing teams

6. **Different meeting areas** for smoko and lunch were set up for the various teams effectively implement social distancing.

7. As a business that values and cares for the employees, Café was maintained as a take away only for the convenience of the employees.

David Hancock Business Advisor
david@naturalarea.com.au

I founded the Natural Area business in 2003 after a long period of interest in environmental volunteering. Prior to this, I had a successful career in Corporate & International Banking for over 20 years. Our Daughter & Son in Law joined the Natural Area business in 2010 and have since moved progressively to full control and ownership transfer was completed in 2019.



The company currently employs 75 full time staff plus seasonal casuals. Natural Area provides a complete suite of environmental services. The business is vertically integrated with services beginning with seed and progressing to propagation, revegetation, weed control, fire fuel control, flora & fauna survey, erosion control, environmental engineering & ecological consultation.

The company is the only ISO certified and audited nursery & revegetation business in Western Australia. The Natural Area nursery is Accredited under the NIASA scheme and has twice been awarded best nursery status by the NGIA. I have been directly involved full-time in seed science & practice, propagation, nursery construction and management for the last 20 years. David is a longtime member of IPPS, SERA, ANPC, AIH & RIAWA. He is a Board member of IPPS and SERA and have travelled extensively on IPPS & SERA delegations throughout Australia and to U.K & Europe, South Africa, Singapore, Hawaii, New Caledonia and New Zealand.

The Natural Area nursery supports the environmental restoration projects of the company as well as supplying State and Local government & service utilities, property developers, mining companies & community groups. Their propagation experience extends over all Perth & South West WA wetland, coastal and Banksia woodland species. The nursery currently produces 950,000 plants per annum being spread over 450 species. Over 95 % of their growing is from seed. They have developed a

reputation for production of the often difficult to grow species necessary for high quality restoration.

David established Perth Plant Propagation Pty. Ltd. 5 years ago to provide these services to Natural Area, and work on some plant breeding projects (he has provisional PBR status on two native plant variants) and to consult to industry.

In conjunction with fellow Board Member Dermot Molloy, David provided propagation training and advice to the Oman Botanic Garden nursery and recently undertook a large consulting assignment for Bauer Resources of Germany on construction of an Omani desert nursery to establish a constructed wetland project, in the Sultanate of Oman.

WA was spared the massive bushfire events of Eastern Australia and whilst poor rainfall and drought conditions have prevailed on and off for the last 20 years, the impacts have been more on the positive side. The diversified nature of the business in these circumstances have meant that there has been increased demand for post revegetation site watering services and for fire fuel management services in bushland.

Covid 19 has increased costs and management time to reconfigure the teams and establish hygiene equipment and systems. Only one customer has cancelled a plant order due to Covid impacts. The 2020 production is the largest and best quality we have achieved since the nursery was established.

Change is a constant and success comes from managing the risks associated with what the future presents.

I believe that IPPS is no different to many similar organisations, and faces great difficulty in maintaining critical mass in membership and direct support and involvement in a world that is now largely focussed on the individual and not the collective. People are engaging with masses of media communications that dominate their available time.

The absence of a structure / persons to drive membership amongst potential existing businesses has meant that new members have not been forthcoming in adequate numbers to offset those leaving.

The organisation needs to fundamentally redefine itself and find a way of engaging with a larger audience than just those involved in existing horticultural businesses. The challenge is how to do this and grow new members from the same cohort that currently exists.

Thank you everyone for being willing to share your comments, and of course we seek your response and thoughts.

News

Blue is the Pantone Colour for 2020

Well that was the colour chosen for this year, but sadly many people are suffering from anxiety, grief and depression at this time. If you, a friend or relative need help then as well as their doctor there are a number of counselling agencies that provide help including Beyond Blue <https://www.beyondblue.org.au/>.

Challenge

It is many years since we had a challenge for our members in our newsletter. IPPS needs to be relevant, and of value to you, the members, and we believe that the motto of "Seek and Share" is still relevant today and into the future. IPPS started with senior plants people wanting to share their knowledge to the next generation. It is how we need to do this now that needs to change. As we head into Winter and the pace changes could you spare a few moments to consider the questions posed to our directors.

- *How have you coped with the effect of drought, floods, cyclones, fires and Covid 19 over the last 9 months?*
- *It is likely that things will now change into the future, how should IPPS change to meet the challenges this presents us into the future, so that the society continues to be of value to horticulture and horticulturists?*

It would be appreciated if you could forward your response to me so that it may be published in a future edition.

Bruce Higgs

Newsletter Editors Comment

Your board is responding to the challenges at present and are looking into new ways that the organisation can serve members into the future. Publication of the Autumn newsletter was cancelled with postponement of the Geelong conference.

The production of Black Books with the New Zealand region has been delayed with the total lock down in NZ. Let Pam know if you would like to receive one, as a number have already been ordered. Proceedings continues to be available for members on the IPPS [website](#).

I would like to thank David Daley and his team for all the work they put into organising the Geelong conference, which had to be postponed to next year. We will all need to encourage others to attend and get them to join or apply for one of our awards when applications open later this year.

If you are not already a member join up soon. The region also has a [facebook site](#) with horticultural news items and photos as well from past conference tours and activities - search for "International Plant Propagators Society (IPPS) Australia". **Pass your extra printed copy of the newsletter around at work.** A copy of this newsletter and a selection of previous ones are available in colour at <http://aus.ipps.org/news>

Bruce Higgs - editor "the Propagator"

bruce.higgs@bigpond.com

You may not have heard of this business tool before, but it might be helpful considering some of these factors that affect trends in society and organisations. Brainstorm things having greatest impact (threats/opportunities) ... Try it.

PESTEL is an acronym of a systematic strategic business analysis tool used to discover, evaluate, organize, and track factors which can impact on an organisation now and in the future. Using this framework you examines and list **opportunities and threats** due to **relevant** Political, Economic, Social, Technological Environmental and Legal factors. The figure below gives examples only of some common factors to consider.

P	E	S	T	E	L
<ul style="list-style-type: none"> •Government policy •Political stability •Corruption •Competition regulation •Govt. subsidies •Foreign Trade policy •Tax Policy •Labour law •Trade restrictions 	<ul style="list-style-type: none"> •Economic Growth •Exchange rates •Interest rates •Inflation rates •Disposable income •Unemployment rates & trend •GDP •Price fluctuations 	<ul style="list-style-type: none"> •Population growth •Age distribution •Career attitudes •Safety emphasis •Attitude to quality •Attitude to Customer service •Wealth distribution •Health consciousness •Lifestyle attitudes •Cultural barriers •Fashion trends - e.g. Plants, pots 	<ul style="list-style-type: none"> •Technology incentives •Level of innovation •Automation •R & D activity •Technological change •Technological awareness •Internet access - NBN / 5G •Technology life cycle 	<ul style="list-style-type: none"> •Weather •Climate Environmental policies •Pressures from NGO's •Natural disasters •Pollution •Recycling standards •Renewable energy support 	<ul style="list-style-type: none"> •Discrimination laws •Employment laws •Consumer protection •Copyright, PBR and patent law •OHS laws •Trade Practices laws •Labelling