

**FIG Young Surveyors Network**  
**6th Young Surveyors Conference**  
**Report**  
**2021 FIG Working Week**



**Challenges in our New Reality**

Reimagining a Sustainable Future

**15 & 16 May 2021**

**6th FIG Young Surveyors Conference**



# Five Regions, Four Programmes, Two Languages, One Global Conference

The 6th FIG Young Surveyors Conference (6YSC) was held on the 15 - 16 May, 2021, along the 2021 FIG Working Week. The theme, "Challenges in our new reality: Reimagining a Sustainable Future, highlights the place of the current generation of students and young professionals at the cross roads of uncertainty, planning ahead into a sustainable future. This set the stage for several thought-provoking, and interesting insights into the challenges of our current times from young and seasoned surveyors and allied disciplines from all around the world.

The 6YSCe was held in four regional programmes covering the Africa and European Region, the South American Region, the North American Region, and the Asia and the Pacific Region. Each programme comprised a keynote session, two parallel sessions, which included panel discussions and presentations, as well as a plenary interactive session.

In total, the conference brought together about 300 young surveyors from around the world into four regional programmes, which focused on two broad streams - sustainability and professional development. The 6YSC provided young surveyors a unique insight into the future of the surveying profession, the future of technology, as well as sustainable development all within the context of the challenges of the current day. This report outlines what transpired in the the two day conference.

Kwabena Obeng Asiama (Ghana/Germany)

Ferah Pirlanta Köksal (Turkey)

# Africa and European Programme

The African and European programme of the 6YSC was the first of the four programmes to take place. The programme had the Grand Opening of the conference, fielding speakers such as the FIG President, Rudolf Staiger, The President of the CLGE, Vladmir Kruppa, as well as the Chair and Vice-Chair of the FIG Young Surveyors Network (YSN). The session comprised a technical presentation session, a panel discussion, as well as a professional development session which was combined with an interactive session. There were a few technical difficulties with the internet connection of the presenters as well as the moderators. However, this was quickly remedied with a restructuring of the programme.

Report by: Shirley Chapunza (Zimbabwe).

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# The 6YSC Grand Opening

Welcome to the 6th Young Surveyors Conference  
FIG-President Rudolf Staiger



Setting the stage for the 6th FIG Young Surveyors Conference, this grand opening session provided an opportunity for all the young surveyors in attendance to hear from the speakers from FIG, CLGE and the FIG Young Surveyors Network. The conference was opened by **Rudolf Staiger** (FIG President), **Vladimir Krupa** (CLGE President) and **Kwabena Asiana** and **Ferah Koksal** (YSN Chair and Vice-Chair). In their welcome addresses, they each highlighted the importance of the conference and mentoring young aspiring surveyors. Through presentations on their respective organisation.

*"It is time to plan with the future in mind and young surveyors need to find their own way of making a mark through volunteering."*

[Please follow this link for the video recording of the session.](#)

# The Keynote Session: Facing Global Challenges in Times of a Pandemic



## SPATIAL SCIENCES IN HEALTH

Space as an organizing principle for health data

Space as the medium through which health is mediated



The global pandemic has reoriented the way we are meeting the global challenges which persist, the keynotes was centred on the theme of the conference, facing challenges in times of a pandemic. Delivered by **Dr. Prestige Tatenda Makanga** and **Kees de Zeeuw**, the keynotes focused on the application of geo-spatial sciences and land administration in the drive towards facing up the global and societal challenges of our day, spanning global health, climate change, food security, among others.

Dr Makanga gave an overview on the importance of geospatial science and technology. After a brief history of the geospatial work field, Makanga gave his vision on the future challenges and possibilities specifically during the COVID19 pandemic and how geospatial techniques have been proven most useful. To the young surveyors, Dr Makanga says;

*"Embrace interdisciplinarity and stop hiding, innovation needs to be put in the hands of those who can make the difference (policymakers)"*

# The Keynote Session: Facing Global Challenges in Times of a Pandemic



**Kees van de Zeeuw** gave an overview of his career and lessons for future surveyors on this overview. With a lot of personal anecdotes he shared his vision on how kadaster international is managing the future challenges and the importance of geospatial techniques in this roadmap. With regard to the limitations young surveyors face, Kees says;

*"Use what you have to produce whatever you have to produce"*

The first part of the session had its technical difficulties mostly from the Hopin platform itself (Broadcast stopped at the beginning of the keynote session). However, there were enthusiastic reactions in the chat.

Please follow this link for the video recording of the session.

# Presentation Stream: Integrated Planning and Management of Land and Water Resources



How can we transform the challenges of our new reality into new opportunities for a sustainable future? With presentations from **Edgar Barreira** and **Willy Franck Sob**, this presentation track addressed how integrated planning and management of land and water resources can be leveraged as a tool for sustainable development as we move forward.

On GIS strategies for a Better World, **Edgar Barreira** gave an overview on how society is not yet geospatially literate yet we are just in the beginning of a great ocean road between oceans and inland. As strategies for responding to the challenges of our new reality, young surveyors were urged to;

*"Invest in digital to be the Surveyors of the Better Future"*

[Please follow this link for the video recording of the session.](#)

# Presentation Stream and Interactive Session: Professional Development and Knowledge Sharing

HEXAGON | Leica Geosystems

- when it has to be right **Leica Geosystems**

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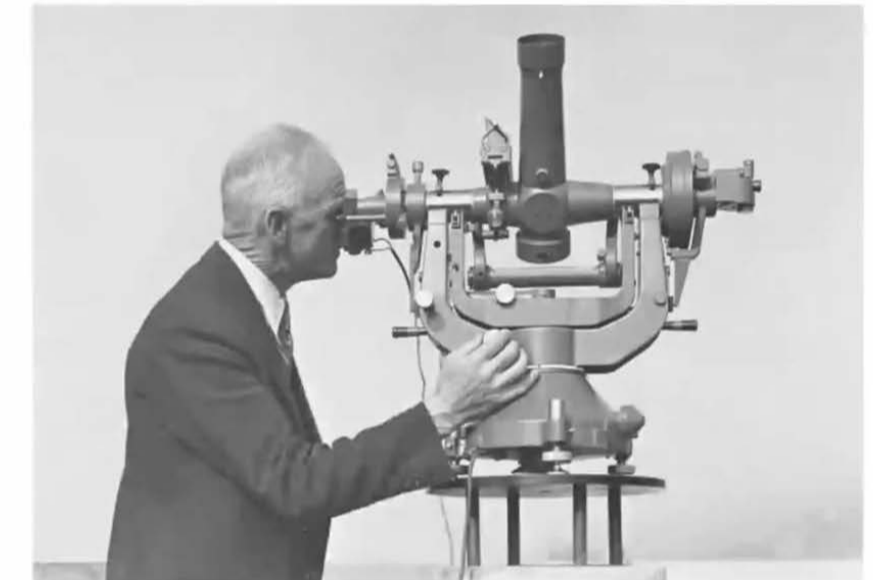
**Pure Surveying – Improve your skills**

Craig Hill, Leica Geosystems AG, May 2021

## Quiz

- Question 4: What is the angular accuracy of the T4 astronomical theodolite?

A:  $\pm 0.2''$   
B:  $\pm 0.3''$   
C:  $\pm 0.4''$



In rising to meet the challenges of this detached yet connected new reality, the relevance of a skillset responsive to the current demands is important. Presenting on Pure Surveying–Improve your skills, **Dr. Craig Hill** gave an overview of a research on surveyor's skills and how Leica is responding to the challenges being faced by surveyors across the globe through training and services like Pure Surveying– Improve your Skills. To young surveyors, Dr Hill says;

*"Be happy to have chosen a career where demand is high, however you need to help the profession by adopting and mastering new technologies".*

Due to technical challenges **Angela Etuonovbe** could not deliver her presentation on "**Strengthening Preparedness for the New Norm as a Surveyor**". Her presentation can be accessed through [here](#).

[Please follow this link for the video recording of the session.](#)



# Panel Discussion: Agenda 2030 – Sustainability in time of Uncertainty



What does sustainability look like in a time of crisis? Covid-19 has awakened humanity to the fragility of our institutions in responding to crisis. However, it has also presented opportunities for growth and inclusion most especially in terms of and through technological developments, reshaping our understanding of sustainability and resilience. This session tried to address the question of what a sustainable future looks like, how we can prepare and build for it and the role of young surveyors as agents of change in this fight for the future for our planet. The panelists who joined us for the session are;

- **Stella Chelangat Mutai (Kenya/Germany)**
- **Ruvimbo Samanga (Zimbabwe)**
- **Leen De Paepe (Belgium)**
- **Dr Kenneth Hyiaman (Ghana)**

with **Shirley Chapunza** and **Dr. Kwabena Asiana** as the moderators.

Please follow this link for the video recording of the session.



## South American Programme

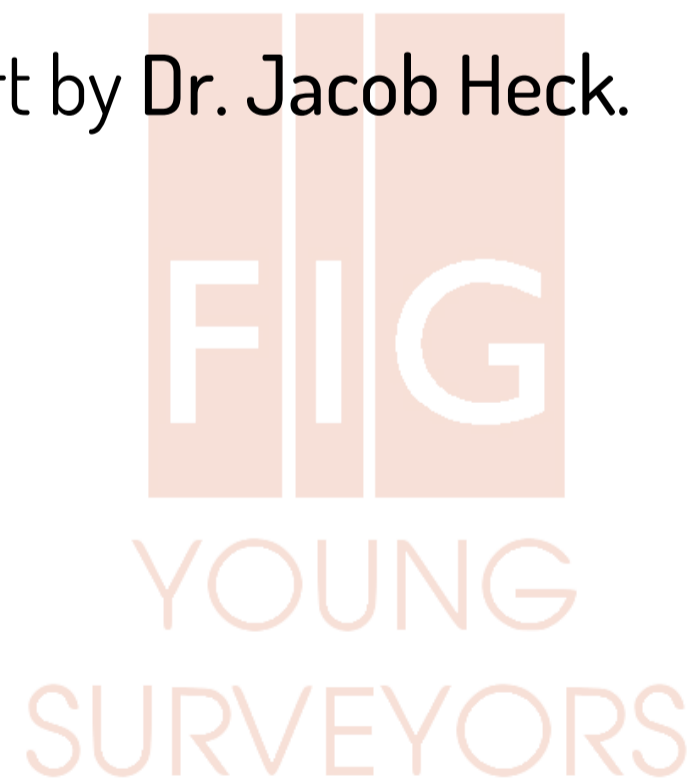
The South American Programme, held in Spanish, brought together several presentations from young and seasoned surveyors in the South American Region. These presentations covered wide-ranging issues including Geomarketing from Cristian Araneda (Chile); Ethics in the use of spatial data, from Paula Caram (Uruguay); Geomatics in Archaeological Salvage Projects, Management Model of an IDE by Pamela Castillo (Chile), and Satellite radar technology for the detection and monitoring of the deformation of the earth's surface from Daniel Hermosillo Camacho (México). The opening of the meeting celebrated the 15-year existence of the FIG Young Surveyors Network, and also its 15-year partnership with the FIG Foundation.

Please follow this link for the video recording of the Presentation sessions ([Session One](#) and [Session Two](#))

# North American Programme

The North American programme promised an equally exciting line up of items, and of course the North American did not disappoint. With a programme filled with interesting presentations, as well as a panel discussion that peaked the interest of the attendees as well as the interactive session, which rounded up the programme. The programme was kick started by the FIG Foundation president, John Hohol, the FIG Young Surveyors Vice Chair, Ferah Pirlanta Köksal, and the President of the NSPS Young Surveyors, Denver Winchester.

Report by Dr. Jacob Heck.



# Opening Session

The FIG Foundation President John Hohol (USA) led off the programme, talking about the 20th anniversary of the Foundation and 15th anniversary of the Young Surveyors Network. FIG YSN Vice-Chair Ferah Pırlanta Köksal (Turkey) spoke to the current activities of FIG YSN, and then NSPS YSN President Denver Winchester (USA) welcomed everyone to the event before activities moved forward with the keynotes.



The FIG Foundation  
is an independent body under the  
International Federation of  
Surveyors

*The Foundation is administered by the FIG Office in  
Copenhagen and directed by a Board of Directors  
appointed by the FIG Council*



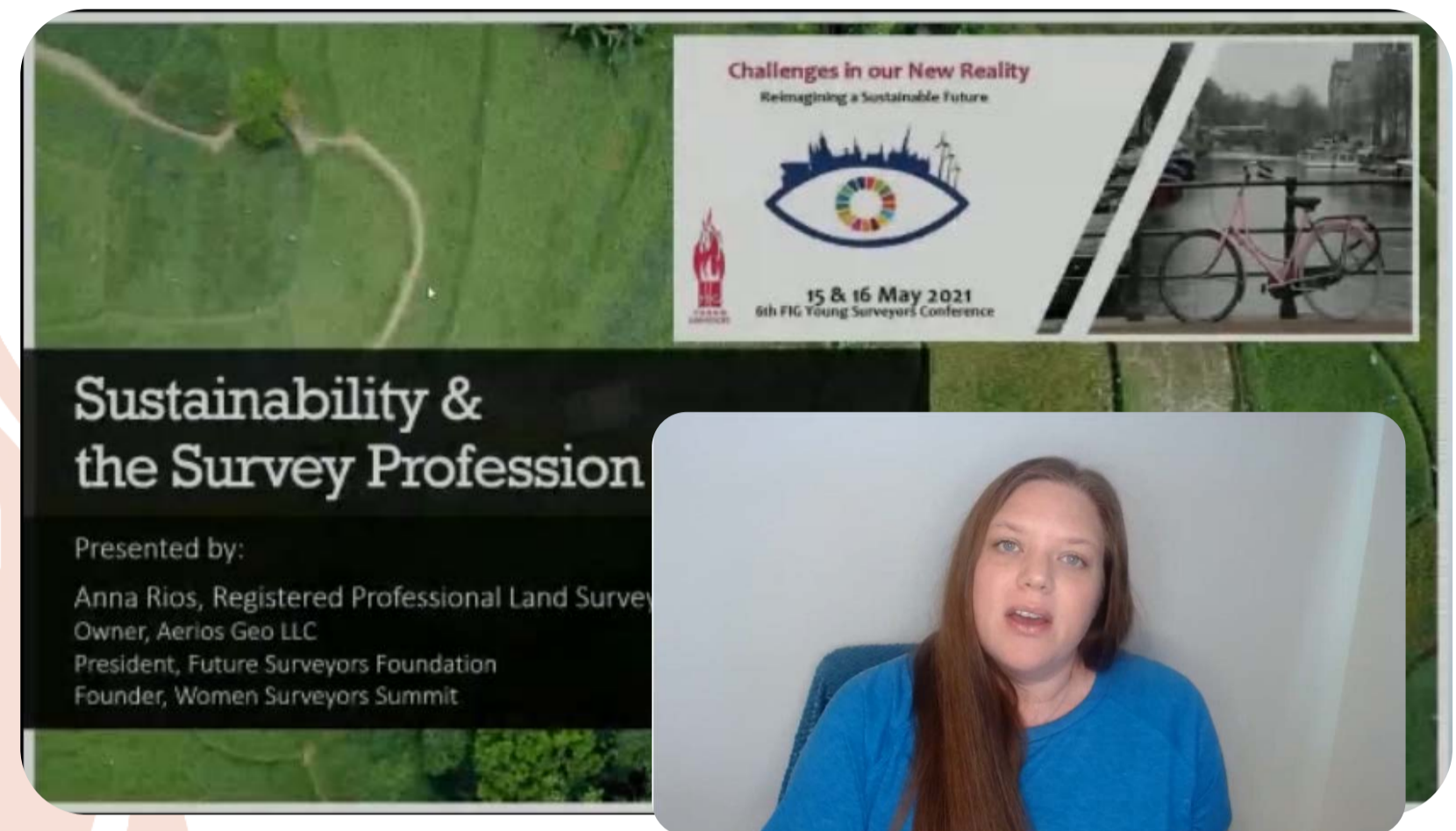
# Keynote Session: Mentoring and Adaption to Crises



The keynote presentations introduced the conference attendees to the two main focus areas of the North American Programme: Sustainability and adapting to crisis. Ms. **Juliana Blackwell (USA)**, Director of the U.S. National Geodetic Survey, led the session with a pre-recorded video presentation where she discussed mentoring efforts within NGS and its broader-reaching implications for sustaining a career and a team. Mr. **Jordan Lawver (USA)**, Lead of Trimble Field Construction AR/MR/VR then gave a presentation titled Bridging the Gap: How Connecting the Digital and Physical Worlds is Accelerating Digital Transformation in AEC that got the audience thinking about how to prepare and react to crisis.

[Please follow this link for the video recording of the session.](#)

# Presentation Session: Sustainable and Unsustainable Practices in 2019



Four speakers gave presentations on sustainability. James Combs, Vice President of NSPS YSN, led the session. The participants were:

- Elly Ball (UK), co-founder of Get Kids Into Survey. Elly was not in attendance, but sent a pre-recorded video titled: “Surveying to protect our environment! How surveyors can literally save the world and how you can teach others and our next generation to do the same.”
- Anna Rios (USA) of Aerios Geo LLC. Anna is the President of Future Surveyors Foundation and the founder of the Women Surveyors Summit. Her presentation was titled “Sustainability in Surveying – Our Profession and Our Careers.”
- Jason Houle (USA), geomatics sales and support specialist of Leica presented “The Potential of One: How to Harness Technology Innovation for a Sustainable, Agile Future”
- Brent Jones (USA), Global Manager of Cadastre/Land Records at ESRI, presented “Change and Disruption in Geomatics.” Brent followed his presentation with an interactive activity.

[Please follow this link for the video recording of the session.](#)

# Panel Discussion: Overcoming the Challenges of 2020



Dr. Jacob Heck (USA) led a panel discussion made up of representatives from government, academic, non-profit, and business groups. Discussion lasted about one hour and fifteen minutes, talking about how things changed after the pandemic started, and how their organizations responded to the evolving needs that came with the disruption.

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# Panel Discussion: Overcoming the Challenges of 2020

The panelists were:

- Ryan Hippenstiel, Chief of the Field Operations Branch at the U.S. National Geodetic Survey
- Alysen Tierney, owner of United Grading and Surveying, a small company in Wisconsin. Alysen has been very active in the FIG Young Surveyors North American Network since it began in 2014.
- Claire Buxton, leader of the Volunteer Community Surveyor Program (VCSP)
- Dr. Omar Mora, professor in the Civil Engineering department at California State Polytechnic University at Pomona.
- Davy McDowell, chief operating officer of the National Council of Examiners for Engineering and Surveying (NCEES).

[Please follow this link for the video recording of the session.](#)

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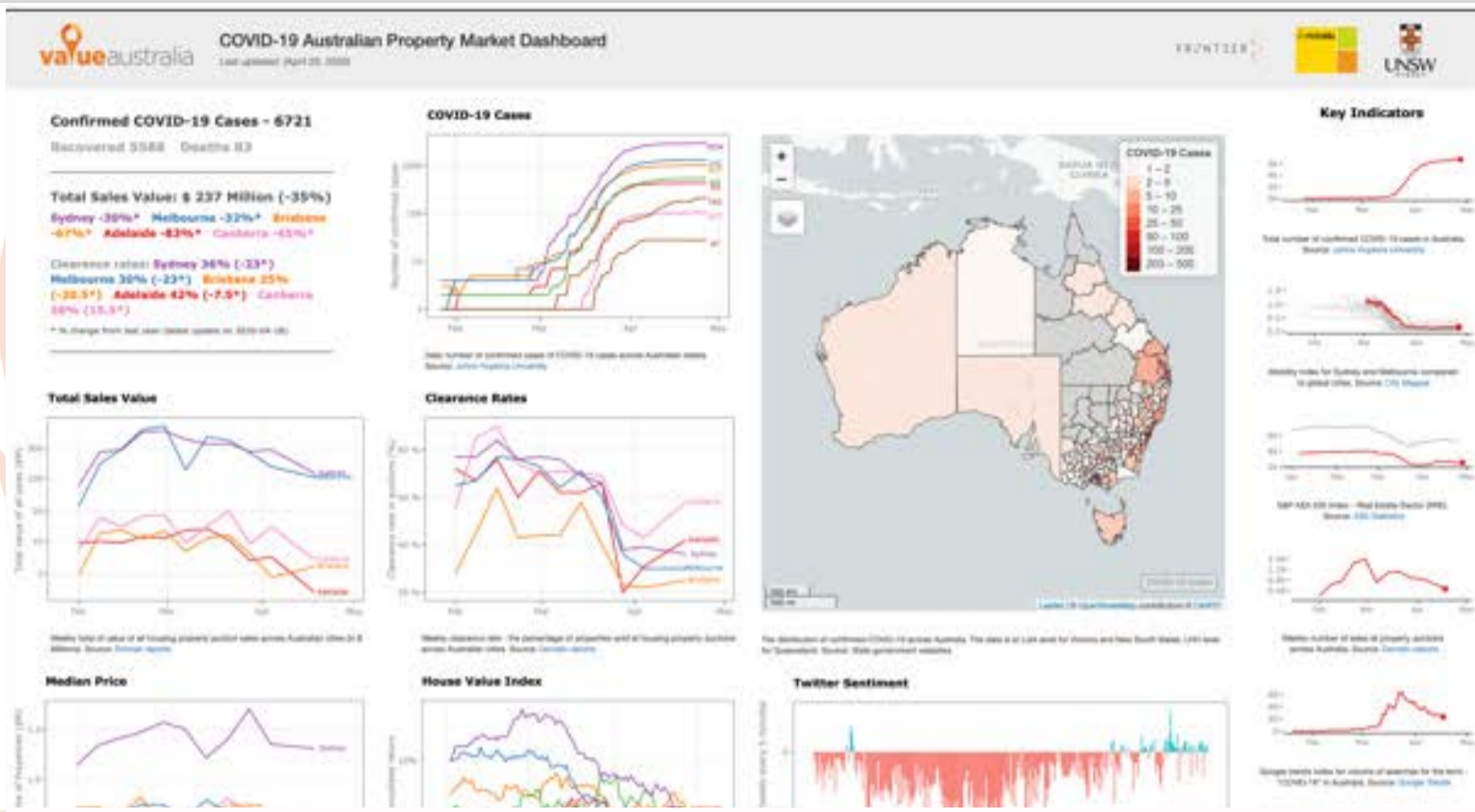
# Asia and the Pacific Programme

The Asia and the Pacific programme closed the two day conference that spanned all the FIG regions. This session started with a short opening message. The sessions that followed were thought provoking as well as a very good blend of the subject matter for the conference, thus attracting the interest of the attendees. The interactive session that wrapped up the programme created a very engaging atmosphere for young surveyors, almost as an in-person conference.

Report by Roshni Sharma



# Keynote Session: Real-time dashboards, space and spatial, and climate change



Three keynote speakers set the scene for the Asia-Pacific session to be innovative, future-facing and thinking outside the box.

Dr Bala Soundararaj (City Futures Research Centre, University of New South Wales) started us off with a deep-dive into how he is developing a dashboard to provide real-time updates on the impact of COVID-19 on the Australian property market.



End-user needs

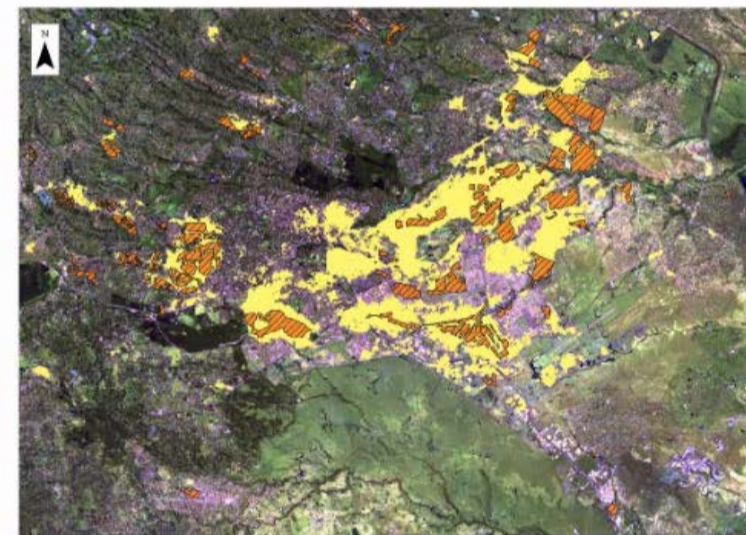
Community Empowerment



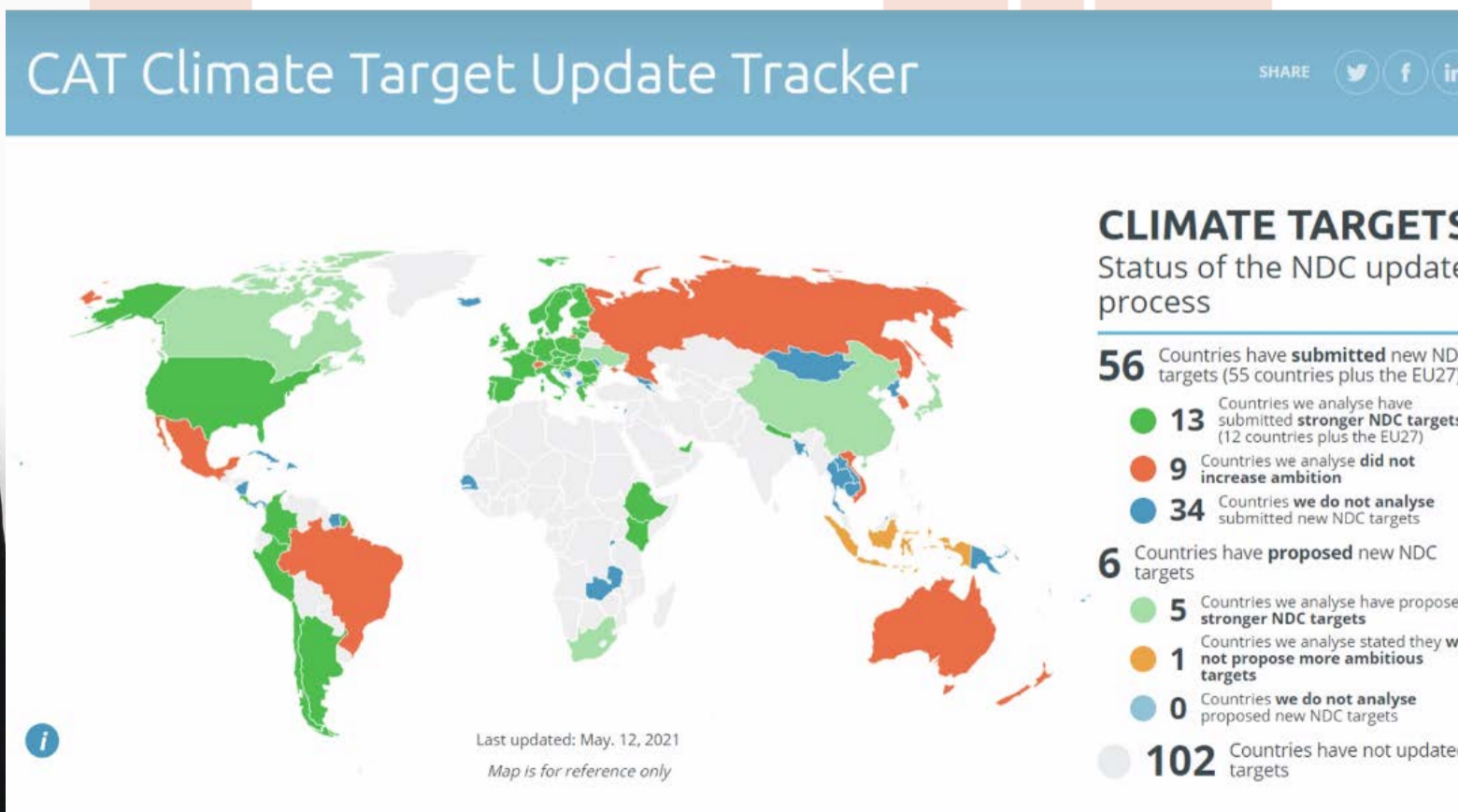
Credit: EO4SD Urban consortium, 2017. "Service Operations Report - Dhaka"

**"to have slums accepted as human settlements that the state should improve and service"**

Lines K, Makau J, "Taking the long view: 20 years of Muungano wa Wanavijiji, the Kenyan federation of slum dwellers", *Environment and Urbanization* 2018, 30(2), 407-424



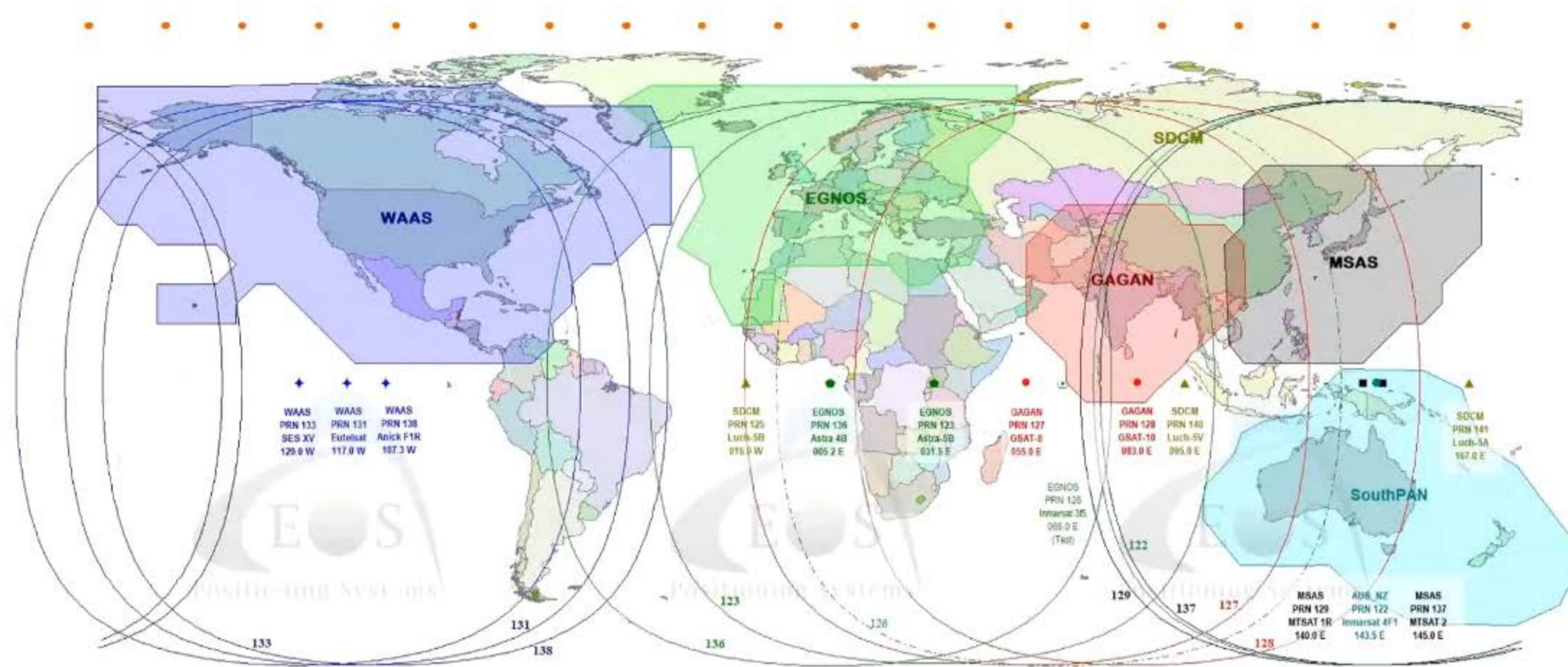
Professor Alan Duffy, a rising star who is prominent in Australia's rapidly developing space industry, introduced us to the connection between space and spatial, especially with regards to how these converge to opportunities to create positive impact in the land administration area.



Priya Gandhi, a Sustainable Buildings Engineer from Atelier 10, closed off the keynotes session by speaking about how climate change is changing the world we live in, and what might be some considerations and impacts on the way our industry works in the near and medium term future.

Please follow this link for the video recording of the session.

## Current SBAS Coverage incl. Aus-NZ SBAS



Chris Marshall from FrontierSI led a presentation and exploratory discussion about the power of precise positioning to transform the ways in which our industry can more strongly interface with other industries. The Satellite Based Augmentation System (SBAS) will lead to more accurate positioning services in Australia and New Zealand, and is key to unlocking a cost-effective way to improve GPS accuracy from around 5 metres to less than a metre – making precise positioning much more widely accessible and affordable.

# Presentation Session: Professional Development Stream

## FIG 6<sup>TH</sup> YOUNG SURVEYORS CONFERENCE

**Topic:** Reflective Practices as a Young Surveyor: Reimagining a sustainable future

**Chethna BEN**

May 16<sup>th</sup>, 2021



## Which soft skills are in highest demand?

### Top 10 Most In-Demand Soft Skills

*(Based on % of members with skill who were hired into a new job)*

1	Communication	57.9%
2	Organization	56.5%
3	Teamwork	56.4%
4	Always Punctual	55.9%
5	Critical Thinking	55.8%
6	Social Skills	55.8%
7	Creativity	55.0%
8	Interpersonal Communication	55.0%
9	Adaptability	54.9%
10	Friendly Personality	54.6%



MATRIXNEWORLD

Dr Chethna Ben provided a thorough and instructive explanation to young surveyors about why documenttion and reflective practices can bring significant value as a professional habit over the course of our careers.

Dr Laurie la Pat spoke to us about what soft skills are, why they're relevant to our career development, and what sorts of ways we can plan to work towards our soft skills over time.

[Please follow this link for the video recording of the session.](#)

## Panel: What soft skills are required for leadership in our new normal for our industry?



Inga Playle, Helli Kotasek, Kate Fairlie, Oscar So, Mingzhe Li & Roshni Sharma (all participants of the SSSI Mentoring Program over the past three years) took part in an engaging and thought-provoking discussion which brought together elements from our keynotes, technical stream and professional development stream. The conversation considered the benefits of two-way interaction that mentoring creates as well as what some of the challenges are for strengthening the intergenerational surveying and geospatial sciences as we move into a future ripe with all sorts of disruptions. A thoroughly enjoyable (and too short!) discussion that was widely enjoyed by all.

[Please follow this link for the video recording of the session.](#)

# About FIG Foundation

The FIG Foundation is an independent body within the International Federation of Surveyors (FIG), which has the primary purpose of raising funds to finance educational and capacity building projects and scholarships.

As such, the FIG Foundation endorses and encourages research in all disciplines of surveying while promoting high-standard training, education, and professional development. It also promotes the Surveying profession and all its facets, in developing countries and countries in transition. In the last few years, the FIG Foundation has been fostering the role of Young Surveyors within the profession and the FIG by seed-funding conferences, meetings and exchanges, in cooperation with international agencies such as the United Nations.

In fact, every year since its inception in 2001, the FIG Foundation offers grants and scholarships to promote education, training, capacity building and continuing professional development. As of today, the FIG Foundation has awarded 208 grants to deserving Young Surveyors from 75 countries, for a total funding of over €303,000.00.



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***"Celebrating 15  
years of  
partnership!!!"***



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# ***Congratulations to The FIG Foundation Grant Winners!!!***



One of the purposes of the FIG Foundation is the funding of educational and capacity building projects and scholarships.

For this year's YSC, the Foundation has extended the Young Surveyors to 75 young surveyors from around the world to join the 6th Young Surveyors Conference. The partnership between the Foundation and the Network has been fundamental to the attendance young surveyors around the world. This year, this partnership has been put to the fore.

**Abdullahi Nuhu Adamu - Abolade Olawuyi - Adamu Bala - Adetayo Onososen - Adewale Adedotun - Afeez Abubakar - Akbar Abubakar Azozo - Akintunde Damilola - Aliyu Abubakar - Andema Landry Kulimushi - Anne Nganga - Babatunde Michael - Basiri Abubakar - Beatrice Mwangi - Boaz Komen - Bogdan Avramchuk - Brian Chepkwony - Buhari Abubakar Buhari - Charity Manthi - Chibuzor Okafor - Chigozie Anene - Chin-Tse Wang - Danylo Kin - Denrazir Atara - Edmond Mazima - Ekpereamaka Ibenegbu - Emery Mugema - Emmanuel Ogunremi - Enock Ssebakijje - Enyinna Tochukwu - Eric Ndunda - Francois Murwanashyaka - Franco Arturo Nigro Carriere - Hamidreza Ostadabbas - Henry John - Innocent Laboke - Izzatu Anoh - Jor Fergus Dal - Jorge Steckler - Joseph Akinwale - Justice Okechukwu - Kazeem Olatunji - Lone Lottering - Lukumon Lateef - Matthew Ikuabe - Mariia Kuzminova - Mfonobong Duncan - Michael Oparah - Michelle Nagawa - Miracle Nwachukwu - Mourine Njoki - Moses Arojogun - Mustapha Mahmud Bakori - Laeticia Kalmogo - Nagya Saidu Kudu - Ngon Akuba - Nkurunungi Mazwe Ivan - Nor Ainn Alfatihah Zamzuri - Nutifafa Kojo Asare - Ohwotuemuhor Omamakpor - Oleksandr Petrovych - Opeyemi Okolie - Pawan Thapa - Ross Mowbray - Samaila Moses Philip - Samuel Abiodun Alara - Shakti Prakash Joshi - Sopekan Rillywan - Stephen Akuneto - Sunday Aina - Timothy Aminu - Tosin Olanrewaju Adesina - Victor Fameso - Viola Orina - Yuliia Loshakova**

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**Tim Brouwer**  
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**Dr. Kwabena Obeng**  
Asiama  
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**Ferah Pirlanta Köksal**  
Turkey

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**Simone Emens**  
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### Logistics



**David Elegbede**  
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### Africa and European Programme



**Shirley Chapunza**  
Zimbabwe



**Shyama Kalicharan**  
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### South American Programme



**Melissa Roberts**  
Uruguay

### Asia and the Pacific Programme



**Roshni Sharma**  
Australia

### North American Programme



**Dr. Jacob Heck**  
United States

An aerial photograph of a vast desert landscape featuring rolling sand dunes. The dunes are characterized by rhythmic, parallel ridges and valleys, creating a textured, undulating surface. In the lower-left and lower-right areas, several camels are visible, some with riders, moving across the dunes. The lighting is warm, suggesting late afternoon or early morning, with long shadows cast across the sand. The overall scene conveys a sense of a traditional caravan journey in a remote, arid environment.

***To be continued...***