International Public Works Conference, Hobart 2019

THE INSTITUTE FOR DRONE TECHNOLOGY

Drone TEST&TAG

DRONE INDUCT

Dronesafe

PARKES SHIRE COUNCIL

GREATER DANDENONG
City of Opportunity

EAST GIPPSLAND
SHIRE COUNCIL

City of Burnside

BASS COAST
SHIRE COUNCIL

CITY OF GREATER
GEELONG

South Gippsland
Shire Council
Come for the beauty, Stay for the lifestyle


JOHN
HOLLAND


WEST GATE TUNNEL
PROJECT


QUEENSTOWN
airport


GLENCORE


intertek


venues
NEW SOUTH WALES


origin


Knight
Frank


POSTERA CRESCAM LAUDE


THE UNIVERSITY OF
MELBOURNE


Sydney
Airport


Bendigo
TAFE


UTAS


AGCSA


KANGAN
INSTITUTE


AMC
Australian Maritime College


RioTinto


BW


Beveridge Williams


PEREGRINE
CORPORATION

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EST. 2016

Safety

Efficiency

Innovation

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Safety

Working at heights

Site inspection / oversight

Confined Space

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Efficiency

Speed of work

Truth of Data

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Innovation

Accurate mapping

New data gathering

New data analysis / products


plimp


Autonomous Retail
Service Bot

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Volumetric survey of gravel pits and stockpiles

Basic asset inspection: buildings and grounds and vegetation.

Media and events.

Mapping sport fields that have salinity issues to monitor whether amelioration efforts are working.

Project monitoring to get progress reporting to both monitor the project but also for engagement with the community.

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Lidar mapping for flood planning and mitigation.

Road surveying.

Weed spraying.

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Weed spraying on reserves.

Surveying land fill sites.

A lot of tree inspections.

Media and promotions.

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EAST GIPPSLAND SHIRE COUNCIL

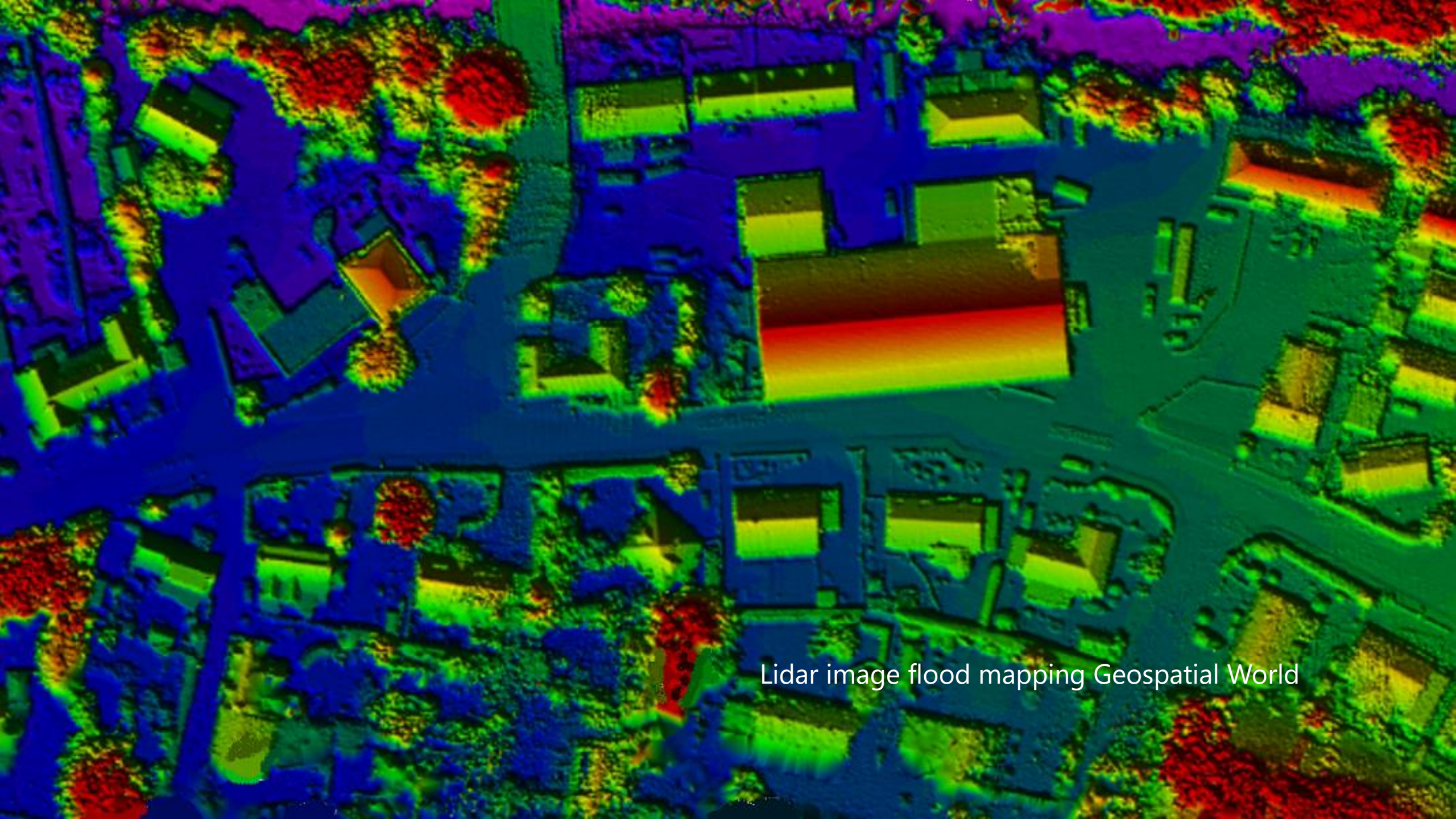
Strategic planning near Lakes Entrance looking at Myer St and Esplanade intersection to create a 3D model. (3rd Party provided data crunching.)

Bridge, roof and solar panel inspections.

Lidar for beach erosion assessment and monitoring with Gippsland Ports.

Illegal removal of vegetation.

Simone Spykers: “What ***can’t*** we do with drones?”


Lidar image flood mapping Geospatial World

NDVI image
Onesoil

NDVI = **0.83**

NDVI = **0.54**

NDVI = **0.21**

NDVI = (N(0.001 nm) - N (0.1 nm)) / (N(0.001 nm) + N (0.1 nm))

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3 D imaging volumetric survey in Pix 4D

https://cloud.pix4d.com/pro

https://www.dronedeploy.com/app2/data/5cff2d35ca0cff81d5f6ae94;jwt_token=eyJhbGciOiJIUzUxMiIsInR5cCI6IkpXVCJ9.eyJzY29wZSI6WyIxM2JlMmRhMjAzX0VDQjlFRURCQTBPUEVOUElQRUxJTkUiXSwidHlwZSI6IlJlYWRPbmx5UGxhbiIsImlkIjoiNWNmZjJkMzVjYTBjZmY4MWQ1ZjZhZTk0IiwiZXhwIjoyNTM0MDIzMDA3OTl9.quqVRsnMGv5m1BXZJpp7YuNP0trj2c22IOWz5v0y0Z4gZjGovryB6J4qgQJVzImDOM4T605DRLJ7Ib8TkACIkA

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Common Mistakes:

Rushing to buy drones

Unstructured use

Under-investment in training

Low or misdirected stakeholder engagement

Attempting to exploit regulations

Failure to train managers.

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Best practice:

Don’t do any of the things on the previous slide

Balance capability with outcome

Staff lead

Strategic understanding of competitive advantage

Low-barrier systems with a solid process framework

It’s about the data NOT the drone

Board level understanding

Implementation pathway

Readiness

- ReOC
- Policy &Procedure
- Stakeholder engagement
- Data processes and security
- Procurement
- Insurance

Training

- Induction
- Remote Pilot Licence
- Use training
- Integration training, ie. With existing systems
- Drone Safety for Managers

Management Platform

- Reporting requirements
- Log requirements
- Who what when where, and legally
- DroneSafe

Things to think about:

Who / which department will have oversight of the drone integration program?

Hub and spoke or decentralized implementation?

Procurement processes (central / decentralized)?

Pilot cases, or broad adoption?

Timelines / sequencing?

Approval processes for integration (policy and procedure)?


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