intelfuse

INTELLIGENT FUSION OF DATA

investigate

interpret

implement

Data	Analysis	Operations	Compliance

Intelfuse Pty. Ltd. | 1300 720 626 | www.intelfuse.com.au

Engineering with advanced technology.

About us

Intelfuse Pty. Ltd. is a solutions company dedicated to improving the reliability and reducing the cost base of power transmission & distribution assets. Our offering is not constrained by location and we can work in any geography around the globe.

We deliver risk-specific inventory and analysis via LiDAR advanced remote sensing technology and business analytics software.

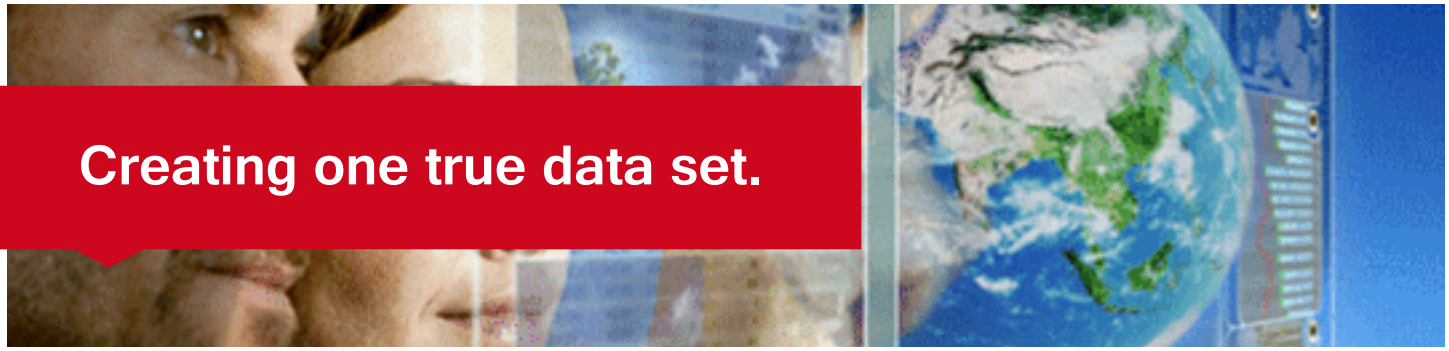
Our solutions include deployment of ground based and airborne LiDAR, GIS, PLS-CADD and innovative technologies to fully identify and map a utility's assets, the risks relating to those assets, and ancillary structures in the service corridor.

Captured data is modelled to create a digital 3D representation of the utility's network, delivering precise information about the nature and location of assets and threats.

Intelfuse has the in-house skills and resources required to provide a tailored end-use solution for your project. Our services range from high-resolution LiDAR and imagery collection, to the delivery of end-user engineering products, in a wide variety of formats, including PLS-CADD.

Industries served by us include:

- Electricity Transmission & Distribution
- Roads and Highways
- Railways
- Mining
- Pipelines
- Forestry



Creating one true data set.

Vision

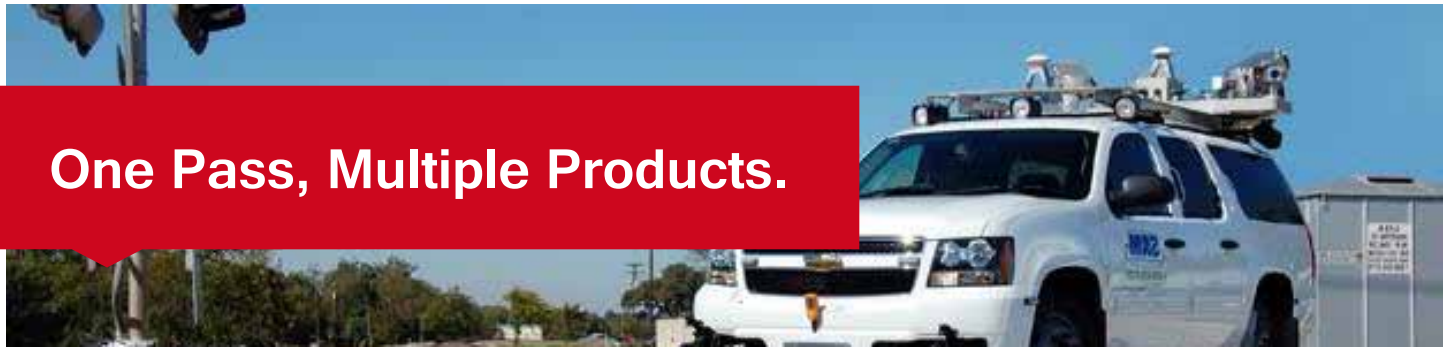
Creating one true data set of your above-ground assets.

Mission

Enabling utilities to reduce the cost and risk of doing business.

Values

Innovation.	Never resting on what was, forever looking for what could be better.
Ablity.	Using the best people and technology to radically improve results for our customers.
Achievement.	Turning ideas into outcomes, commitments into delivery, and success into growth.



One Pass, Multiple Products.

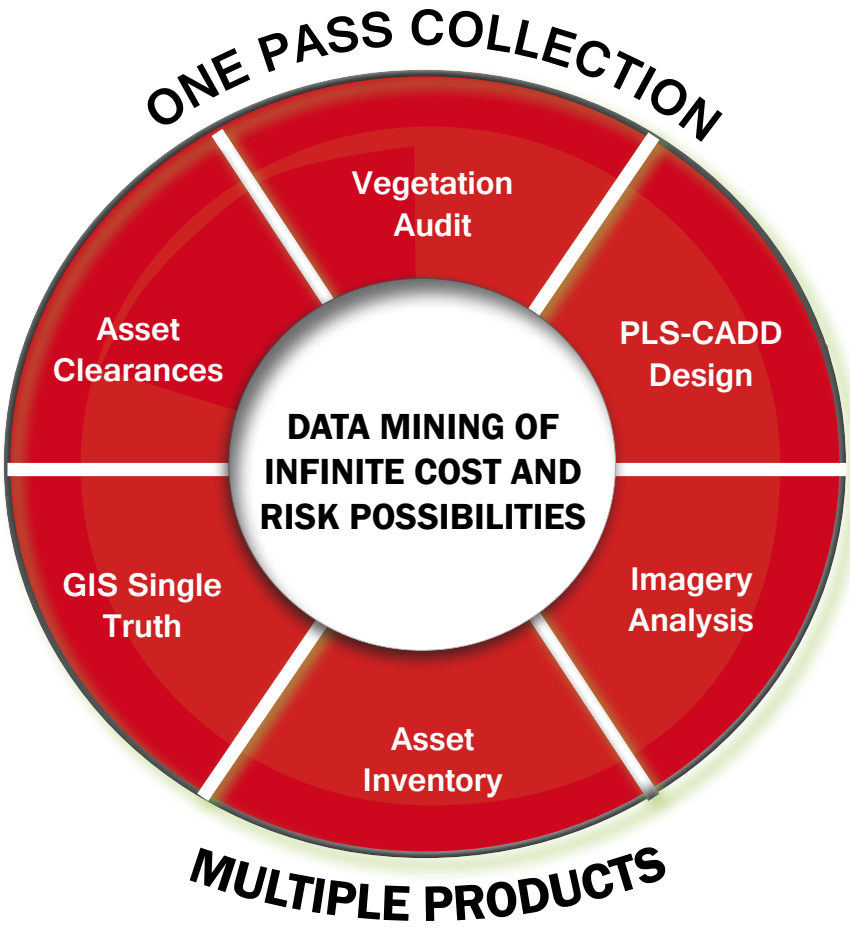
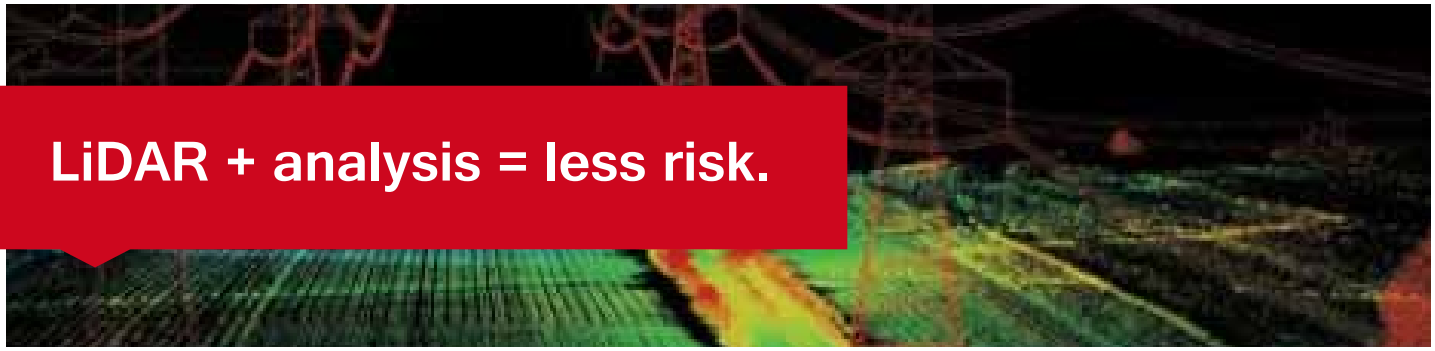


Image taken from a 300m distance



LiDAR + analysis = less risk.

We use a unique combination of technologies including LiDAR (Light Detection and Ranging) to accurately map and inventory electrical assets, identify vegetative threats, and predict changes in infrastructure due to load, temperature, and other factors.

We help utilities achieve compliance for vegetation management, as well as improve corporate governance and asset utilisation because the precise location of every pole, tower, conductor, substation, and structure is identified with its exact latitude and longitude coordinates.

What is LiDAR

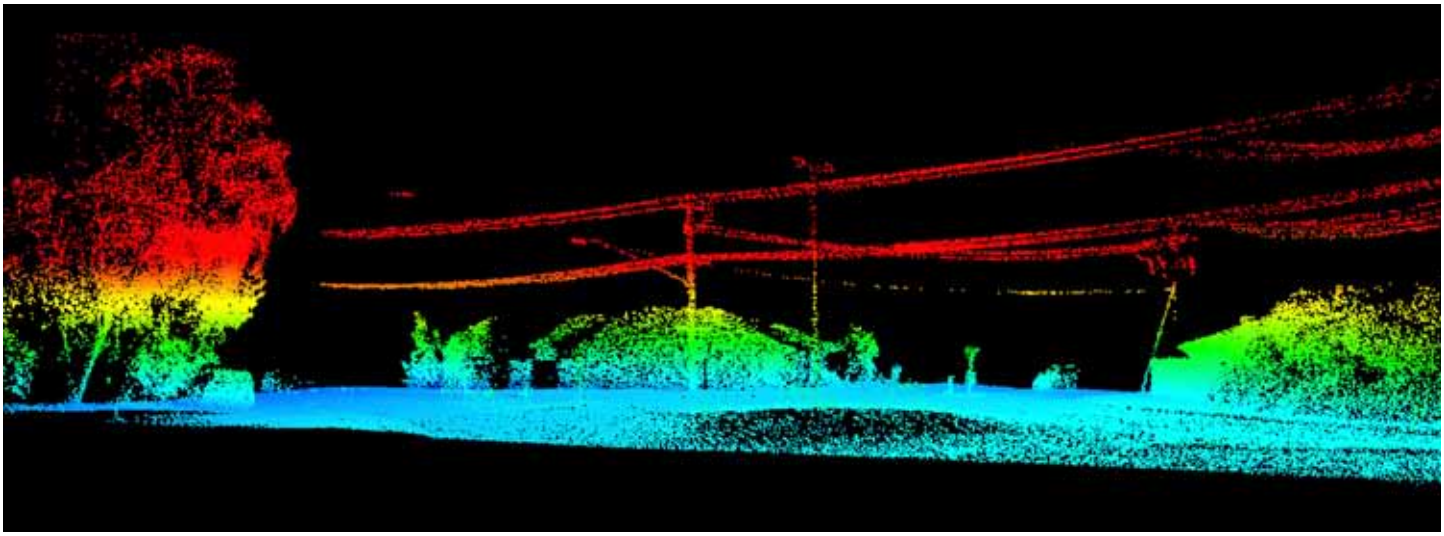
Light detection and ranging (LiDAR) is a technology that uses laser pulses to generate large amounts of data about the physical layout of terrain and landscape features. It can be broadly separated into land-based and airborne lidar systems.

The LiDAR-generated data can be output to multiple formats and is managed through our work management system after sag and sway modelling has been performed. The benefits of this Asset & Threat Identification services include:

- **Fast** - Hundreds of kms of lines scanned per day.
- **Accurate** - Precision mapping at centimetre-level accuracy.
- **Multi-dimensional** - tree height, structures and conductors included to provide complete picture as well as future modelling.
- **Safe** - Greatly reduces likelihood of vegetation-related outages.
- **Efficient** - Fly over traditional barriers to easement access.

Applications

- **Power Transmission and distribution** - Asset modelling, PLS-CADD, GIS correction and Vegetation infringements.
- **Railway Corridor Mapping** - Aerial or hi-rail based
- **Highways** - Full inventories and GIS capture of assets and vegetation.
- **Urban environments - LiDAR data is often used for** Telecommunications OR Fibre optics planning work.
- **Forestry** (mapping of tree canopies). Ability to penetrate tree canopies and vegetation even in densely foliated areas.
- **Oil and Gas** - infrastructure development planning and design (Roads, pipelines, plant, well site).



Knowledge is power.

Our Solution

Our offerings at Intelfuse are founded on our history of working with pressing industry issues such as bushfire exposure, reducing expenditure and the need to understand asset conditions and clearances.

We are committed to helping utilities make the change from outdated historical records and manual field collection to GIS, asset systems and near real time data acquisition.

Our 3 stage process goes beyond normal survey of assets and data collection and focuses is on helping utilities interpret the data and build outcomes that allow them to make transformational changes withiin their business.

Investigate

- We scan hundreds of km of line per day using multiple LiDAR and imagery capture platforms.
- Our approach is to utilise aerial and/or mobile survey techniques – ensuring urban and rural areas are efficiently captured.
- Technology allows us to safely replace manual subjective observation with digital data at survey grade accuracy.
- We are continually updating to the latest technology and techniques.
- Our capture is customised to optimise your outcomes, e.g. accuracy, imagery, modelling potential, multi-use data.

Interpret

- The LiDAR and imagery data is processed, classified and formatted.
- We use ESRI GIS and a number of geospatial packages to catalogue and organise data.
- Data is modelled in PLS-CADD and our engineers validate key exceptions and opportunities.
- We analyse sags, clearances, electrical and telecom design options, tensions and thermal ratings.
- Our focus is on risk identification and status of vegetation, assets and attachments, e.g. lights, other circuits and infrastructure.

Implement

- We turn data into knowledge and work with you to discover new insights for your network.
- Our approach is to assign costs and benefits to the data, so you can remove costs from your business.
- Data is customised and presented to be fully enabled for seamless transfer to your field resource.
- We are committed to embedding new data into workflows that make efficiency differences to you.
- We give you full access to the data with tools to maximise your ongoing use of the data.

Why us.

We connect with you at a local level.

Moving from collecting visual data to automated spatial data is ground-breaking. Our team scopes the project, automates the processing, and produces reports that give you accurate local data specific to your utility. We live the process with you to make sure you get what you need and seamlessly integrate data into your business outcomes. While we use the best the globe has to offer by way of technology, processing innovation, and cost efficiency, our local team will ensure the process is customised and delivers for you.

Intelligent use of data.

At Intelfuse, we see great value in data and with our history in the utility sector we understand the problems that careful conclusions drawn from accurate data can give. Our focus is on analysing and interpreting data to solve the following questions: **What costs can be saved? What risks can be better managed? What alternatives are on offer? What are the priorities of remedy? What can be deferred? What is the status of a network, how is it trending, how well are we managing our resources at maintaining the network? What is the most efficient use of capital that can be deployed to grow the network?**

Implementation and integration.

Networks have remained largely unchanged for over 75 years. With the convergence of technologies such as digital and geospatial, networks are on the cusp of accessing the upsides of these changes. At Intelfuse, we help utilities take advantage of this wave of new technology, ensuring it is fully integrated into existing systems at full scale, and usable by every layer of the organisation, right through to the field-based user.

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