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Flood Forecasting Information Sheet

Piccard Pty Ltd – November 2019
Commercial in Confidence

AI Flash Flood Alert System

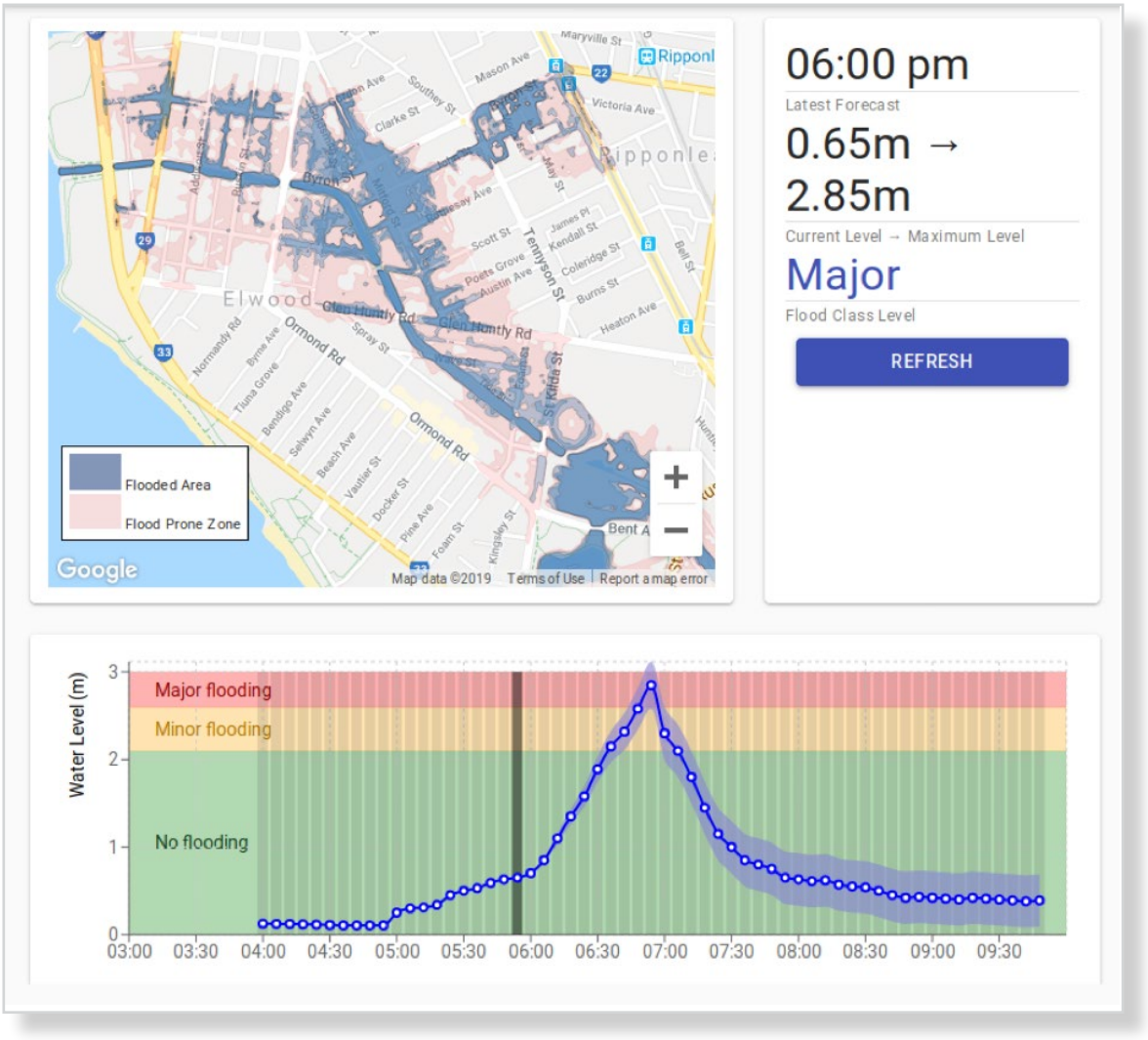
What is it?

An end-to-end, fully automated flood warning system, based on AI technology, that predicts flash floods at predetermined flood hotspot locations.

The system includes:

- Water level monitoring at the designated hotspot location.
- An AI system that learns from data to predict floods at that location 1 - 2 hours before the onset of flooding.
- A cloud based desktop/mobile dashboard for visualising flood risk.
- Automated SMS alerting of anticipated floods.

Click here for a demo.



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What are the advantages for councils?

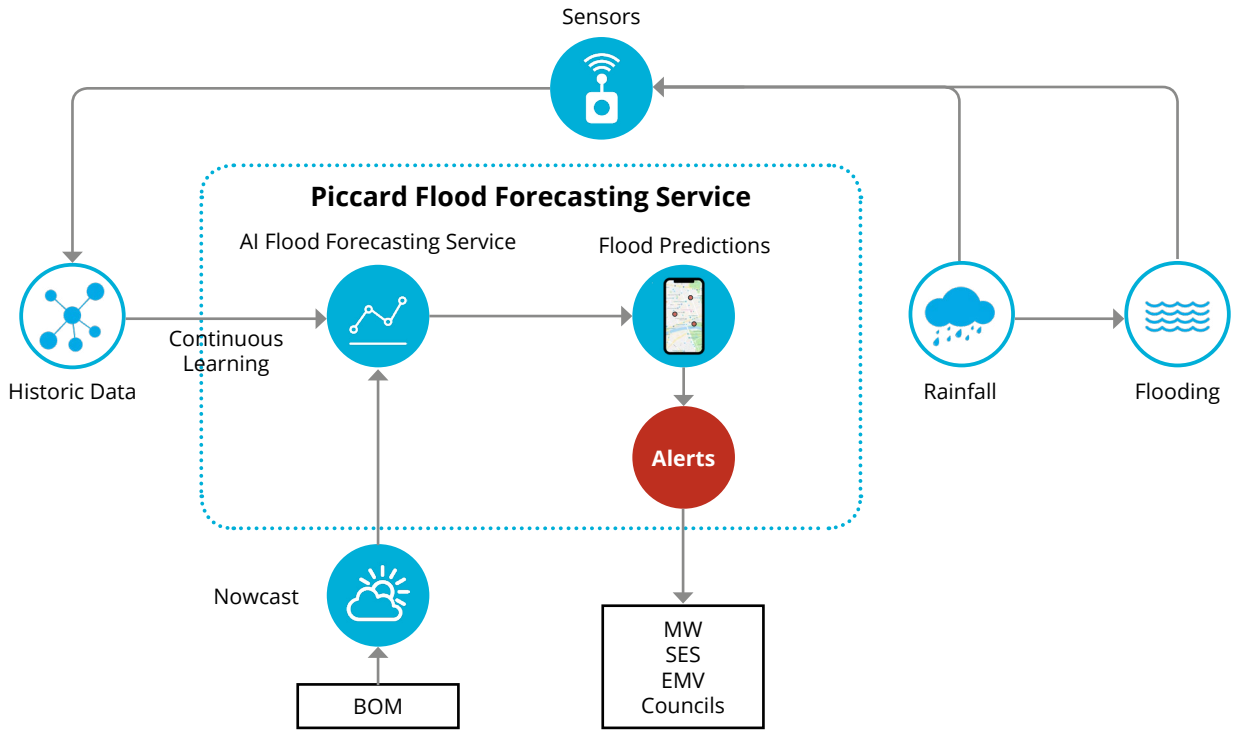
The AI Flood Alert System is ideal for addressing flooding issues that cannot be resolved with drainage upgrades. By proactively closing roads, and alerting residents who are at risk, councils can reduce their risk of adverse impacts and liability arising from floods.

Get more value from existing flood mapping. By including flood extents in the dashboard and alerts, the system allows councils to gain additional value from their previous investments in flood mapping.

With the increase in flood intensity and frequency expected as a result of climate change, floods are set to become a more frequent occurrence. Communities expect their local government to be doing everything they can to mitigate the impacts of floods.

How does the system work?

The system incorporates the latest in BoM nowcasting and real time water level and rainfall monitoring, and continuously learns from previous events to improve its accuracy.



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How is it set up?

The system is deployed in three stages:

1. Sensor installation - level sensors are installed at the flood hotspots where warnings are required.
2. Data collection - data is initially collected for 6-12 months and used to train the AI system.
3. Go live - when the AI system reaches sufficient accuracy, forecasts, SMS alerting and the web dashboard are activated.

How is it superior to existing flood warning systems?

1. Because it is AI based, the system learns directly from data and is self-calibrating. It also learns from similar catchments to improve its forecasting ability - this is how it can predict floods with only 6-12 months of data.
2. The system does not run computationally expensive flood models, and can therefore produce forecasts near-instantaneously.
3. Most existing flood forecast models are designed for riverine floods and are not suitable for urban flash flooding. The complexity of these catchments makes simplified rainfall-runoff modelling unsuitable.

How much does it cost?

The system includes an upfront installation and setup cost, in addition to an annual service fee. Costs will vary depending on the complexity of the sensor installation.

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