



nature sustainability

Published May 2020

Disruption of emergency response to vulnerable populations during floods

> Click to read research publication online



Climate change: Future floods will delay emergency response

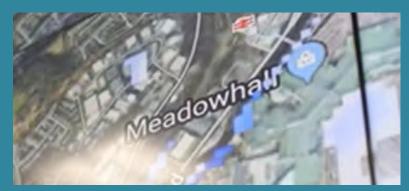
> Click to read BBC news online





> Click to play Video 1

Featuring interviews with the Loughborough University researchers and inventors who first piloted the technology in Leicester City, with Leicester, Leicestershire and Rutland Prepared Resilience Forum



Leicester, UK 00:00, 10 June 2019 FloodMap Live issued a flood forecast for Leicester Braunstone Avenue was predicted to be flooded at approximately 11:00am, 11 June

> Click to play Video 2

Silent footage 11/2019 Sheffieldflood

> Click to play Video 3

Silent footage 6/2019 Leicesterflood



Rising Cost of Flooding

£1.3bn

\$90bn

\$1tn

Cost of 15/16 UK floods to insurers

Source: ABI, 2016

Global annual and projected cost of flooding from 2015 to 2050

Source: WRI, 2015



But it doesn't need to be

400:1

ROI of EU Early Warning system for river flooding

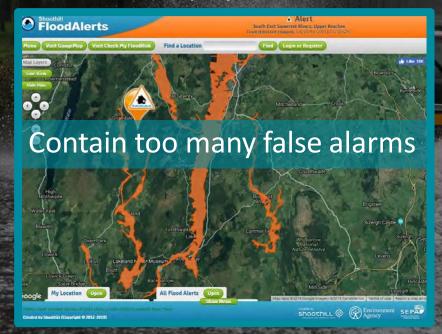
Source: EU, 2015



Existing Flood Forecasting Solutions

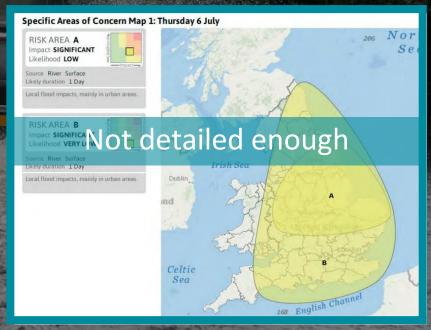
Rivers and the sea

2.4m UK properties at risk



Surface water

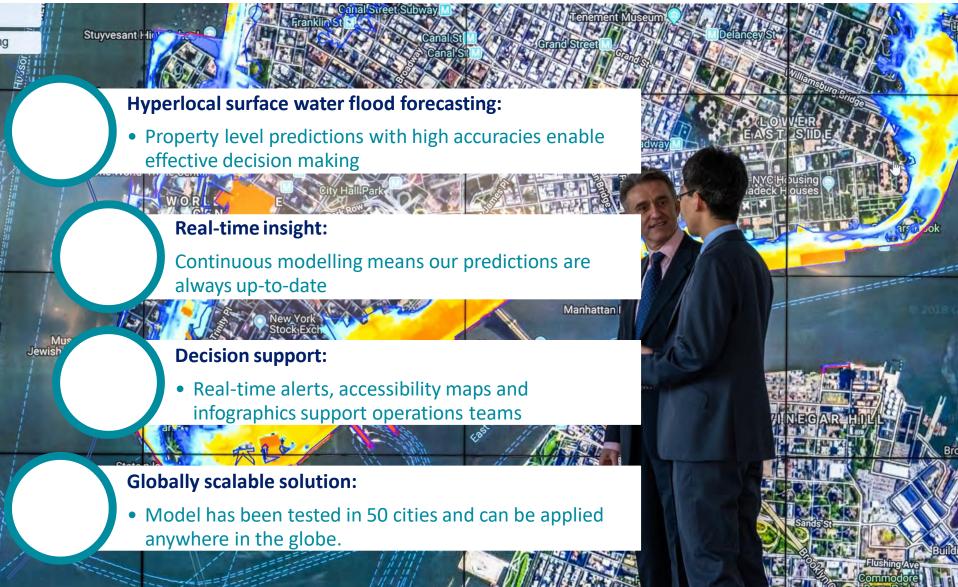
3m UK properties at risk







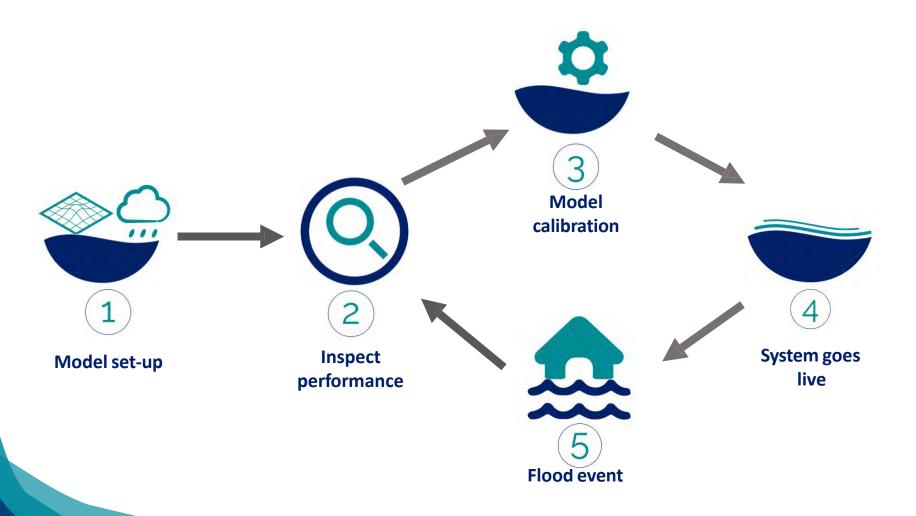








FloodMap Live: How it Works





The Team



Jonathan Jackson CEO (PT)



Dr Dapeng Yu Co-founder and CSO (PT)



Dr Avinoam Baruch Co-founder and COO

Dr William Johnson

Head of Technical Systems Dr Mark Bennett

Strategy Support (NED) Prof. Rob Wilby

Weather and Climate Advisor



The story so far





Secured funding



First commercial orders



System goes live with Cabinet Office

Nov, 2018



£300k for R&D

Jan, 2019

£270k angel investment

July, 2019

Global Lloyds Lab selection, £700k Innovate UK Growth loan

Feb, June 2020



Risk Industry Landscape

Full risk management







Catastrophe Risk Management







Consultancies

JACOBS

ch2m:





Flood Modellers









Route to Market: Government/Smart Cities





Route to Market: Insurance

2015/16 Storms

ZURICH

- •£194m loss
- Previsico would save £12m

Allianz (11)

- ■£93m loss
- Previsico would save£6m

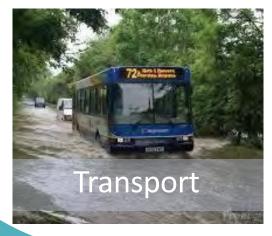


Global Emergency Management Market – \$90bn









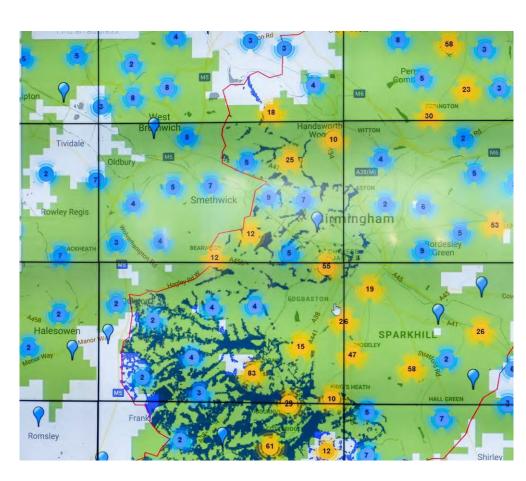






Products & Services

- Software as a service:
 - Annual subscriptions
- Products
 - Data feed
 - Visualisation tool
 - Alerts
 - Analytics
- Other services:
 - Workshops
 - Bespoke projects.





Key Relationships:





IP Protection

The software

- Previsico Limited is a Loughborough University Spin Out with exclusive license for FloodMap and FloodMap Live
- Source code is a novel trade secret

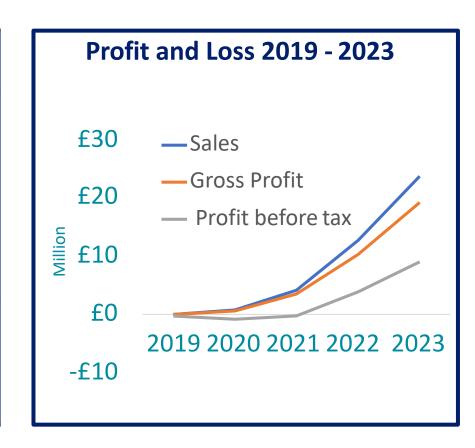
Model improvement

- Model is continuously improving with every flood
- Sourcing Big Data for calibration
- Developing machine learning capability.



Financial Forecast

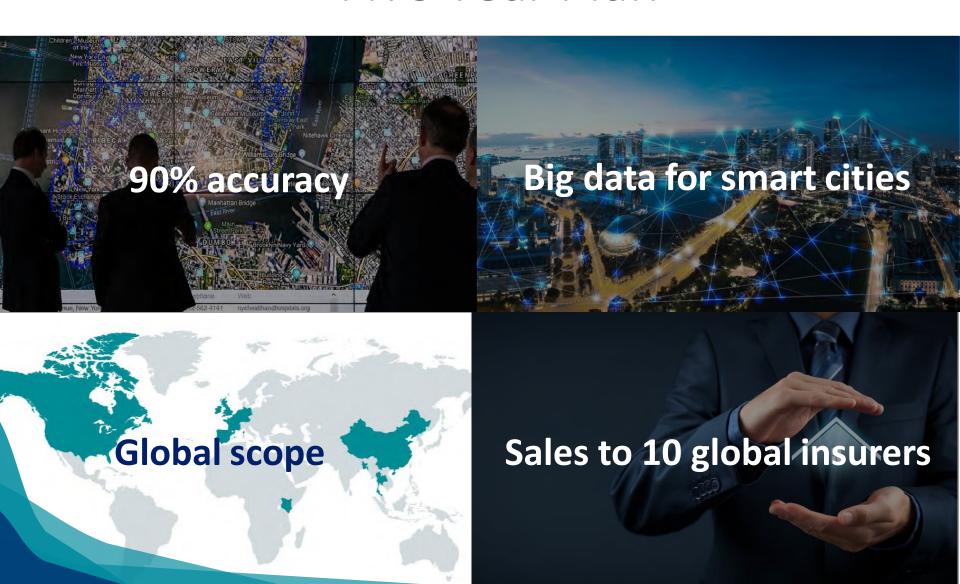
Pricing & Margins: 1st year		
	Multi-city (£,000)	City (£,000)
Service fee*	150	20
Alerts	160	8
Total	310	28
Cost of Sale	74	7
Gross Margin	240	20



^{* 1}st year partner commission 20%, subsequent years 7.5%



Five Year Plan





Beyond five years

