BAPCO 2020

The Annual Event for Public Safety Technology

10 - 11 MARCH 2020
RICOH ARENA, COVENTRY
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Group Manager Steve McLinden

Developing Instantly Deployable Internal Tracking of First Responders at Operational Incidents

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Canolbarth a Gorllewin Cymru

Mid and West Wales
Fire and Rescue Service

Trawsnewid
Transformation
2020
DigidolDigital

Focus Areas ….

GovTech Catalyst Challenge

- *Internal Tracking of Firefighters at Incidents*
- *Partnership Approach*
- *Lessons Learned*

Challenge Winners Progress

- *OxonGreeve*
- *Brandwidth*

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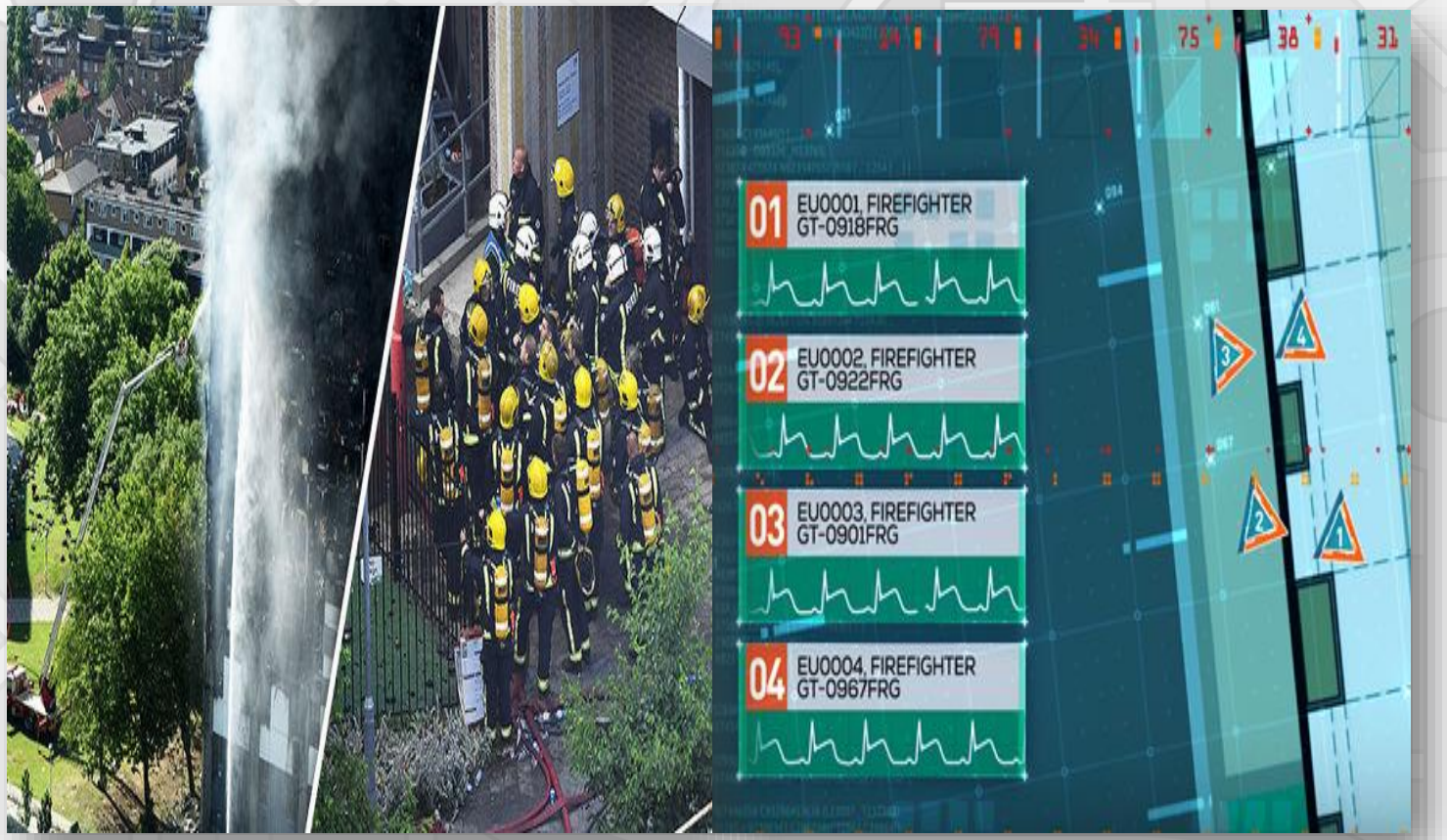
GovTech Catalyst Challenge

£1.25 million UK Government Grant for Instantly Deployable Fire fighter Tracking Inside Buildings



49 Companies Applied

5 Shortlisted to Phase 1

2 to Progress to Phase 2

Viable Commercial Solution by December 2020

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GovTech Catalyst Challenge

Incident such as Grenfell Tower do not happen that often but when they do Incident Commanders need as much situational awareness as possible to keep crews and the public safe

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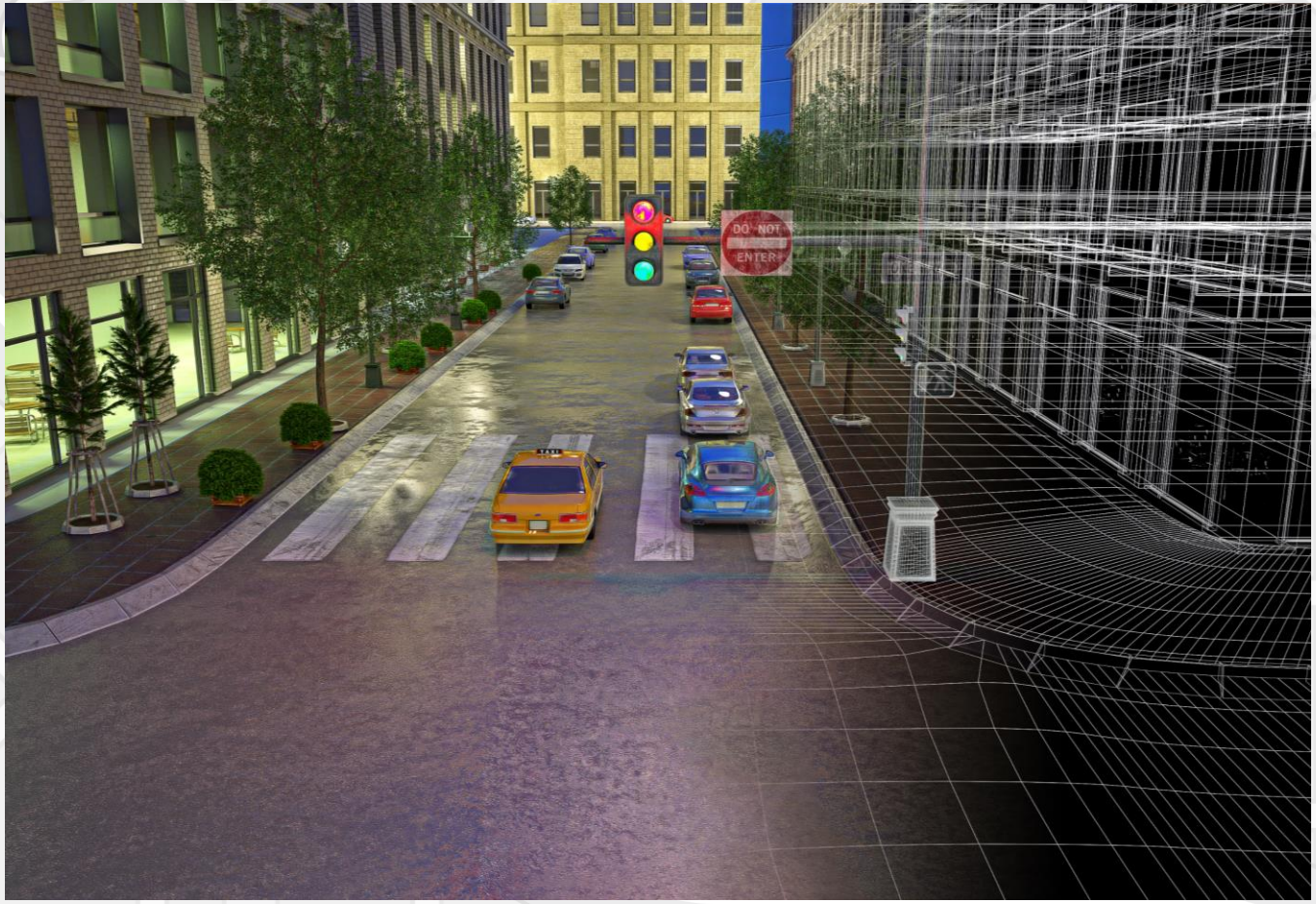
Our Vision….



Our ambition is to enable our Incident Commanders to see through buildings and know where their crews are.

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The Challenge Focus Areas….

- Tracking Devices
- Mobile Networks
- Software Design
- Artificial / Virtual / Mixed Reality

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GovTech Catalyst Challenge

- *We Do Not Believe One Single Technology will Provide the Solution the Fire & Rescue Sector Needs …*
- *The Technology Already Exists, we just need to Re-imagine it in the Fire & Rescue Context …*
- *We Believe the Best Solution will Probably be Achieved through technology Companies Working Together …*
- *We have No Interest in a 'Customer Supplier' Relationship, We are Looking for Partners.*

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Our Requirements….

Operational crews will need the tracking solution to work at all locations be they complex or simplistic in layout and size. These premises may not be known to the service prior to the event

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Our Requirements….

The solution needs to be instantly deployable and Potentially Operating Remotely from the Appliance

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Our Requirements….

The solution must be able to operate in hostile environments with room temperatures over 600 degrees Celsius; Dense carbonaceous smoke; 100% humidity; Collapsed structures; In or under water

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Our Requirements….

Require minimal set up for the end user so not to disrupt or slow down operations

Instantly Deployable in Less than 90 Seconds

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Our Requirements….

Information must be presented to the Incident Commander in a clear and concise way to enable enhanced situational awareness and decision making

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Visualising the Data….

IRIS Assistant for Commanders in the field

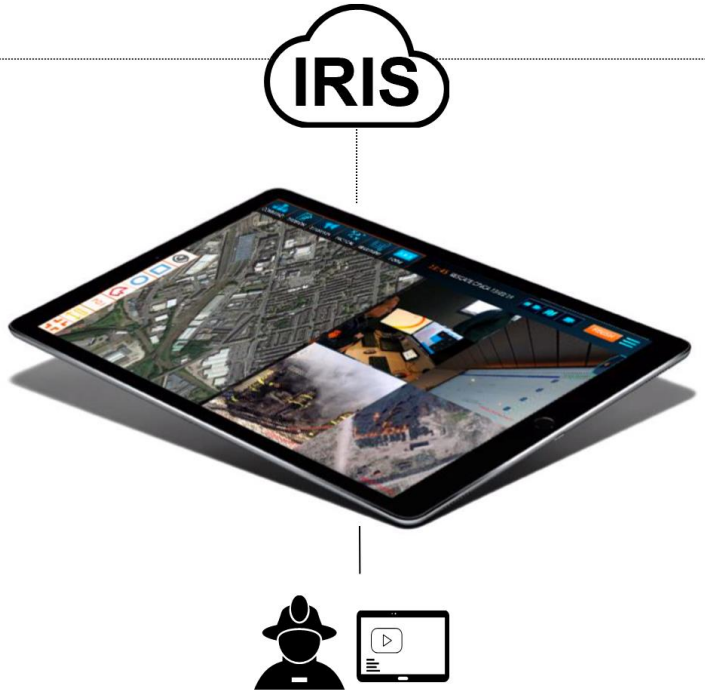
Static Data

GIS

Emergency & Risk Plans

Standard Operational Guidelines

Historic or Open Data



Real-time Data

Cameras

Radios, GPS & IoT

Combines all sorts of information with coordination tools to give commanders the best insights for their decisions

Unblur

Solution needs to integrate with our Incident Management Solution to provide seamless single access point for situational awareness

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The Challenge Winners….

OxonGreeve

'Collaboration'

Brandwidth

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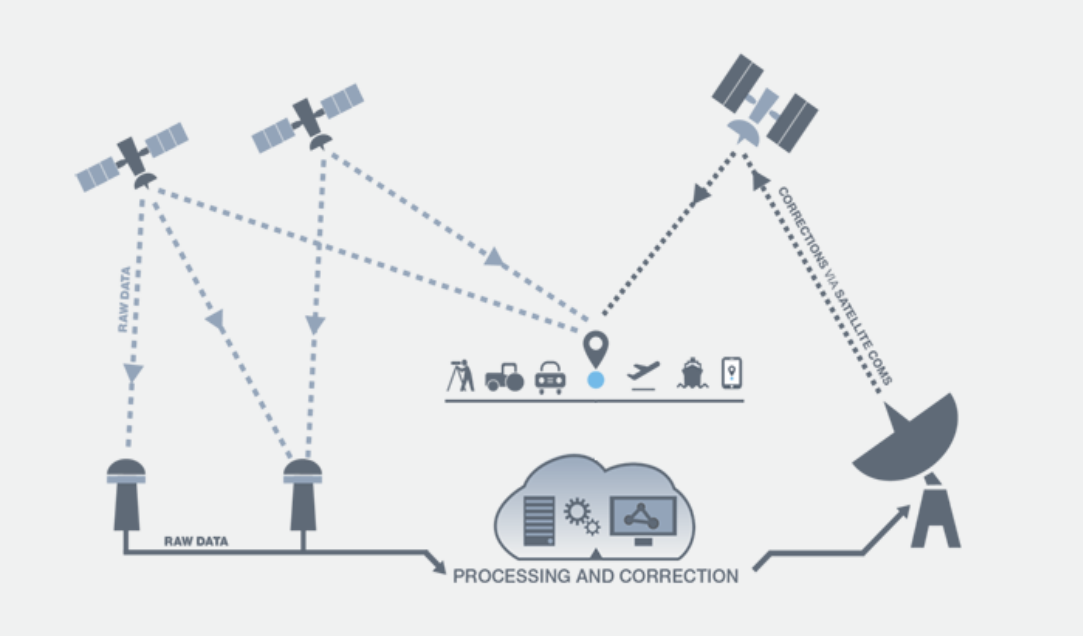
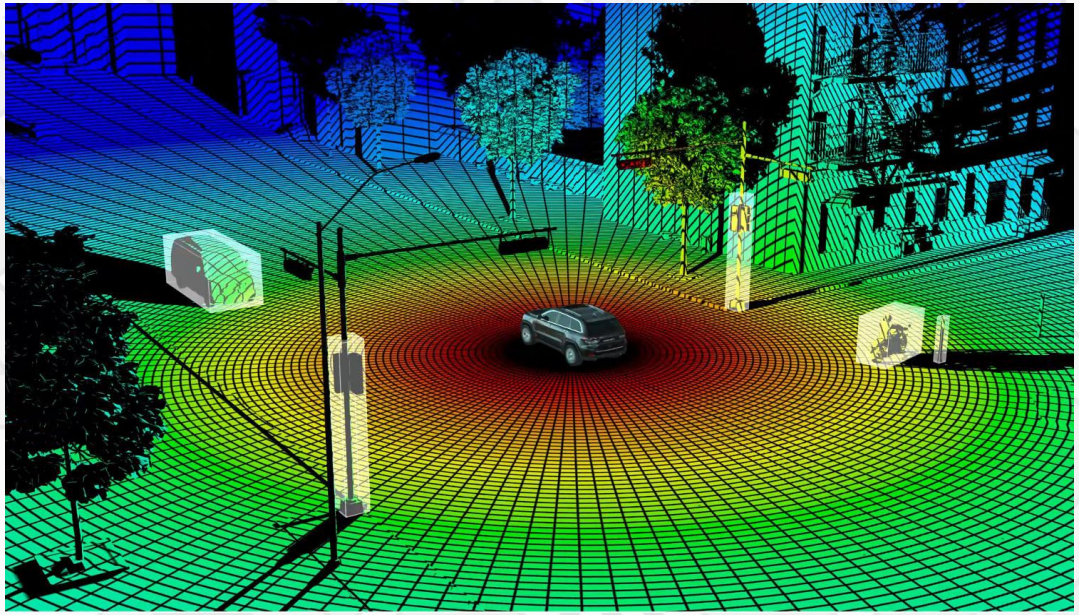
What are the Challenges….





- Relies on existing infrastructure (GPS)
- GPS performs poorly indoors
- Indoor options possible but involve set up

- Limited Sensor Options
- Higher Power Usage
- Requires Significant Processing Power

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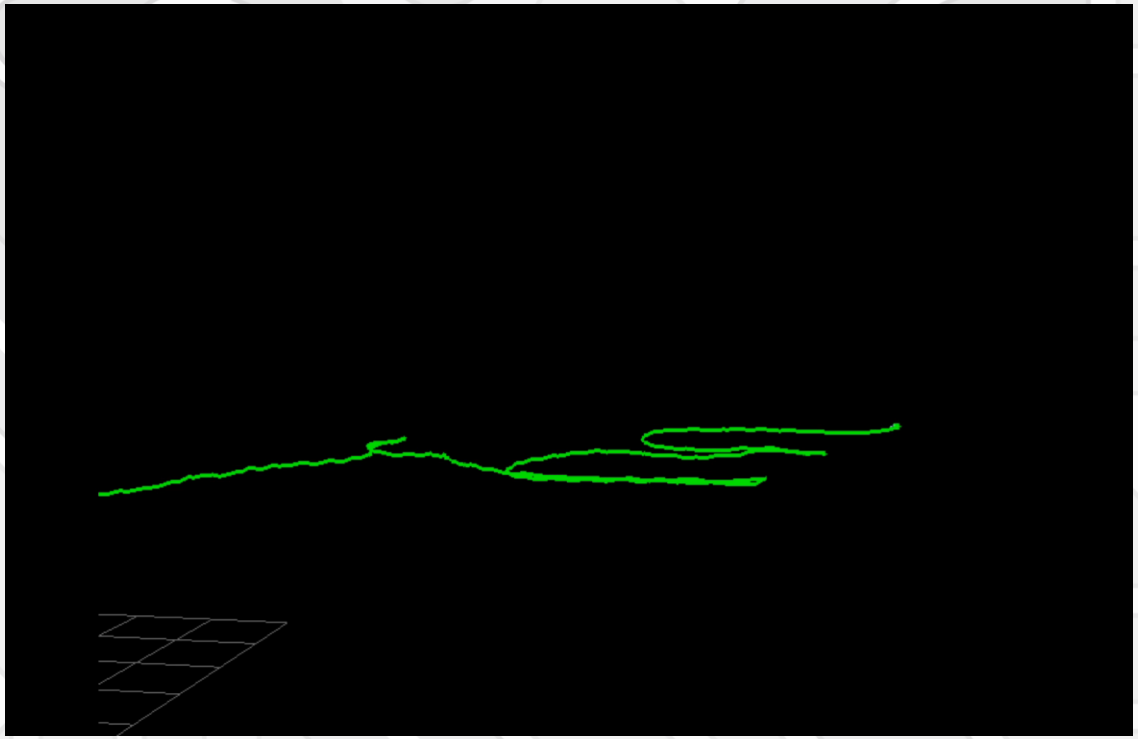
What’s Possible….



OxonGreeve

‘Collaboration’

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Augmented Reality….

Overlaying Tracking Data onto Live Images has Potential to Support Emergency Teams in Locating Lost or Distressed Wearers

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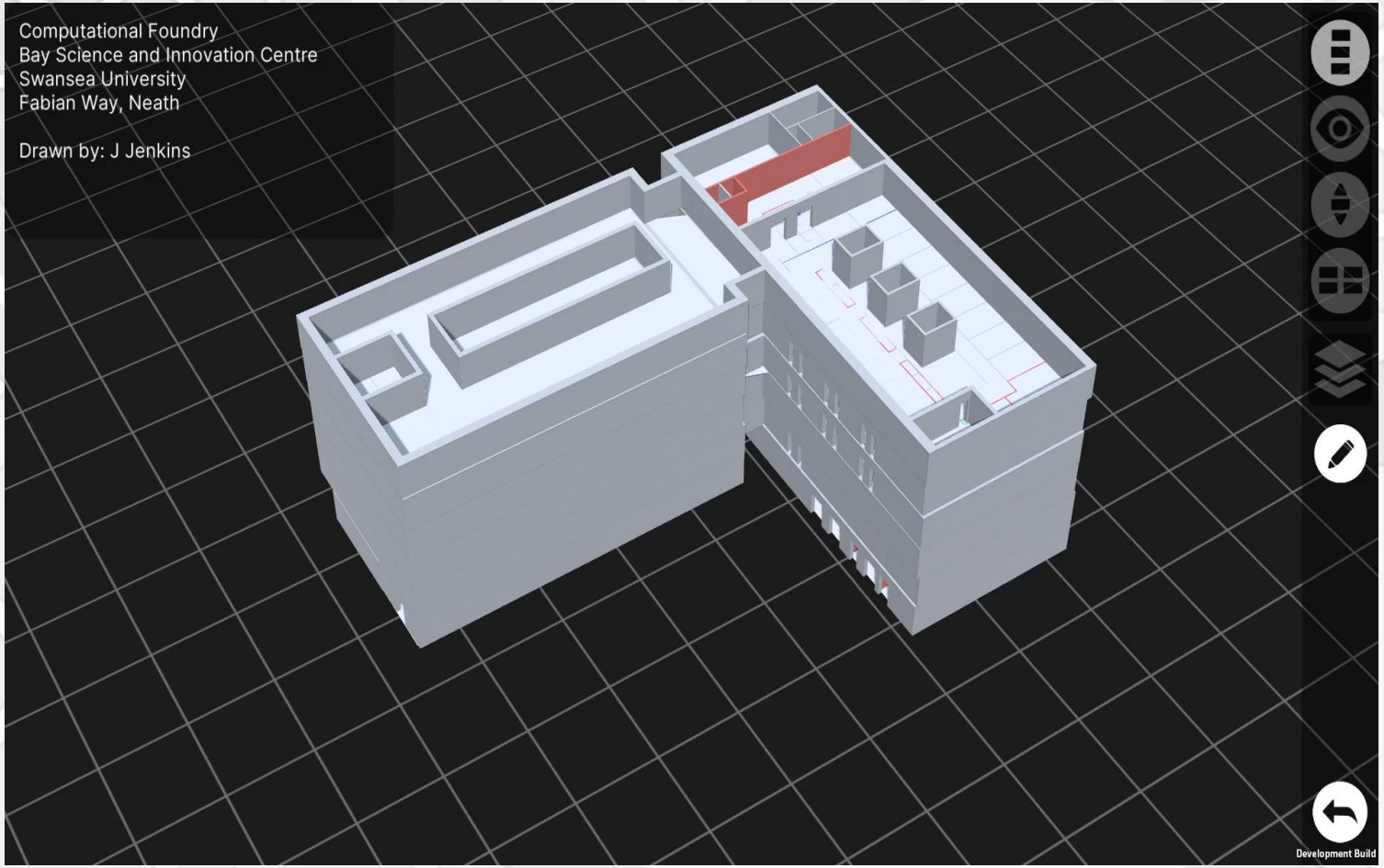
3D Mapping….



Taking traditional CAD drawings and converting them to 3D Interactive models to allow enhanced situational awareness and overlay real time tracking

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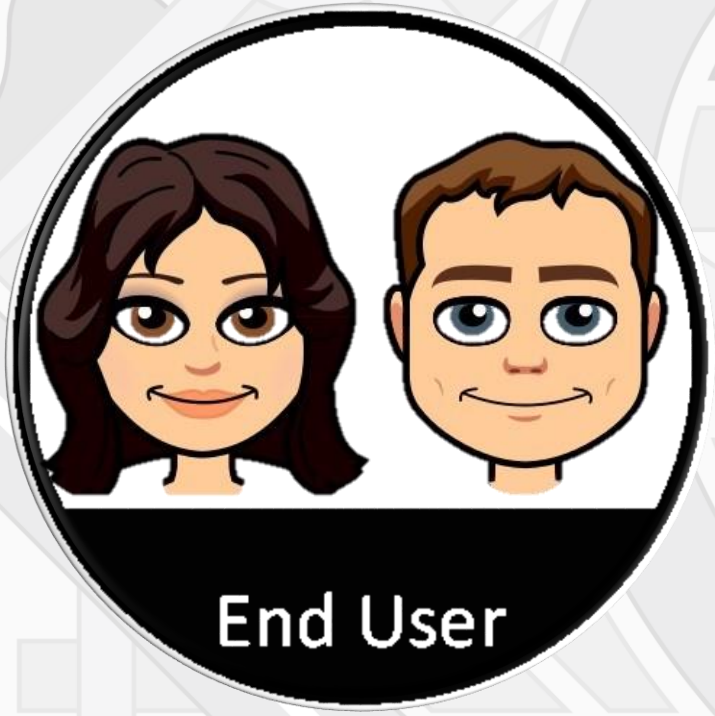
Lessons Learnt….

Technology… *not always right*



Must be at the Centre of Innovation

Fisher-Price®

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Lessons Learned….

Technology Partners

MUST Secure & Maintain Strategic Buy In

Organisational Change is a long Slow Process which needs a constant hand at the wheel

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