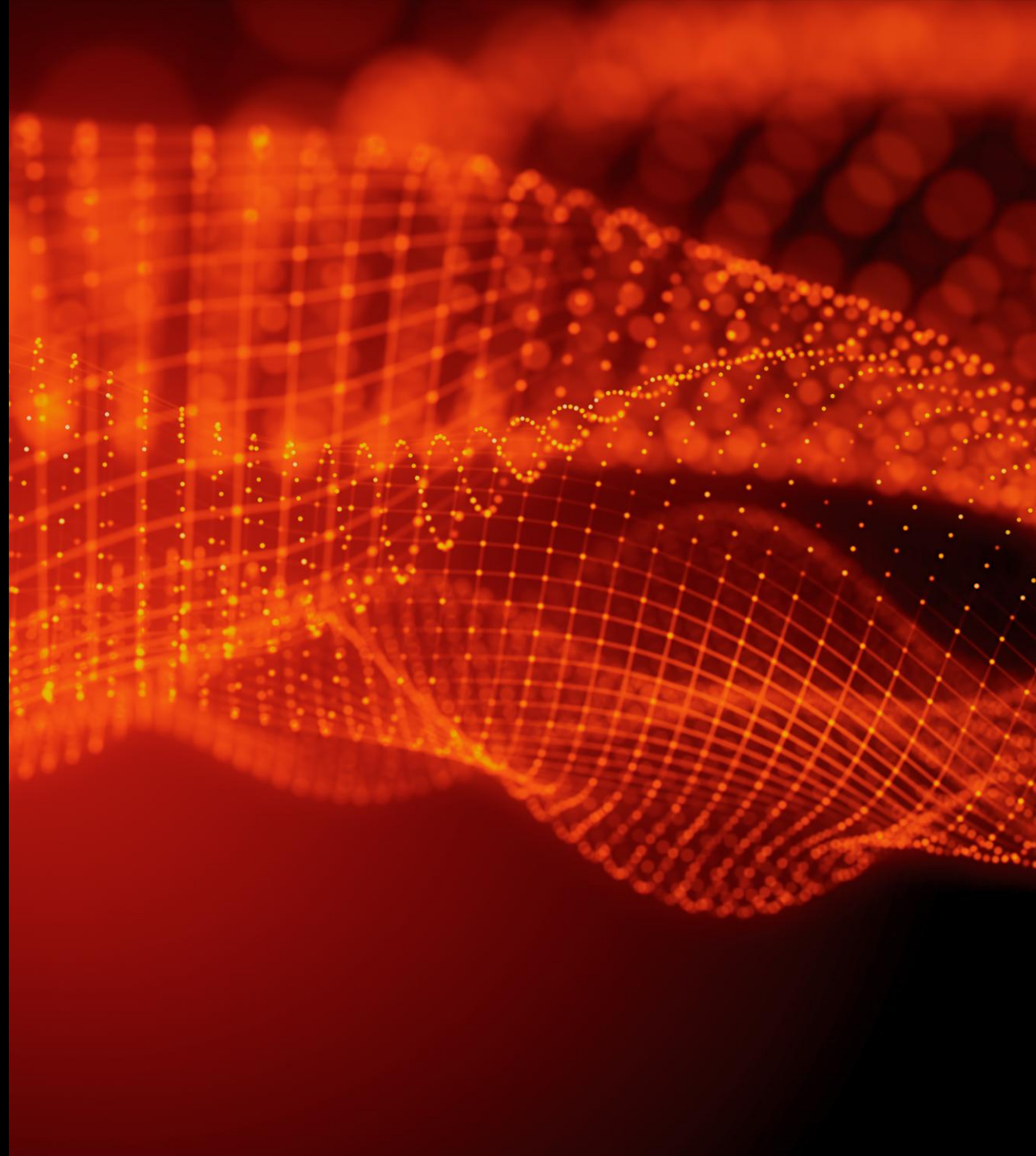
ARTIFICIAL INTELLIGENCE

REAL WORLD USE CASES

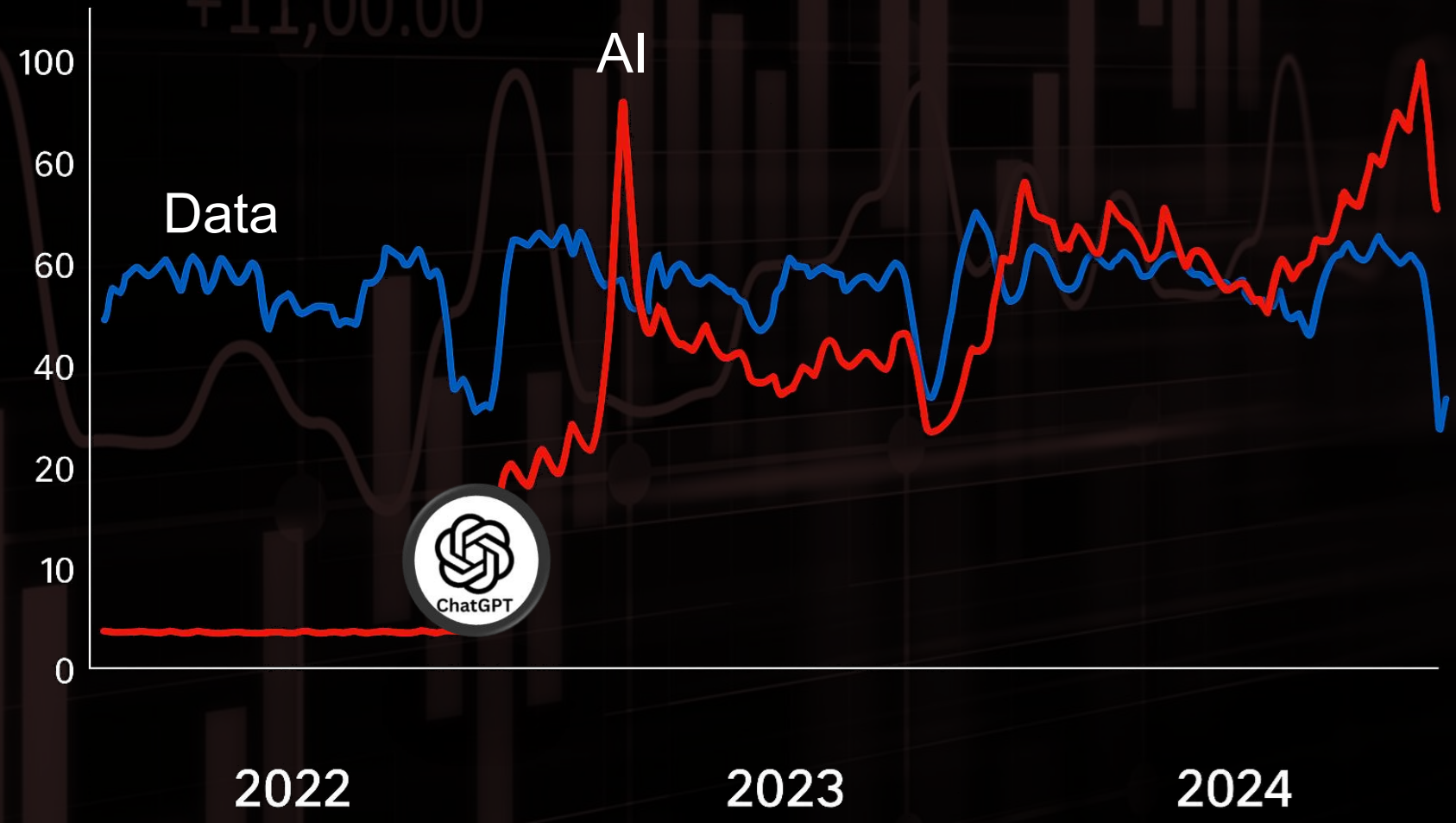
Michael Boyd | November 2025



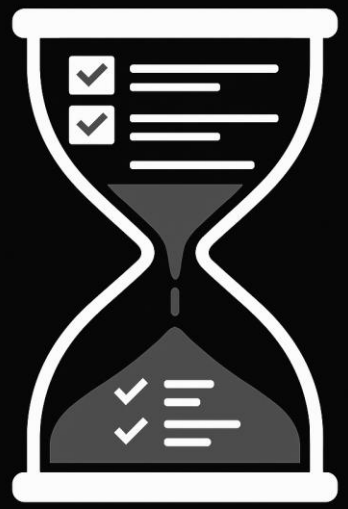
Working in more than 19 sectors

- Aviation
- Commercial office
- Defence & Security
- Energy: Power Generation
- Energy: Transition
- Energy: Nuclear
- Energy: Transmission & Distribution
- Healthcare
- Chemicals
- Local Government
- Maritime
- Mining
- Mission Critical
- Pharma & Life Sciences
- Rail
- Residential & Urban Regeneration
- Strategic Highways
- Waste
- Water

AI goes mainstream



AI does the work we ***shouldn't*** be doing



AI gives us time

AI tackles the work we **couldn't** do

How will AI reshape our roles and culture?

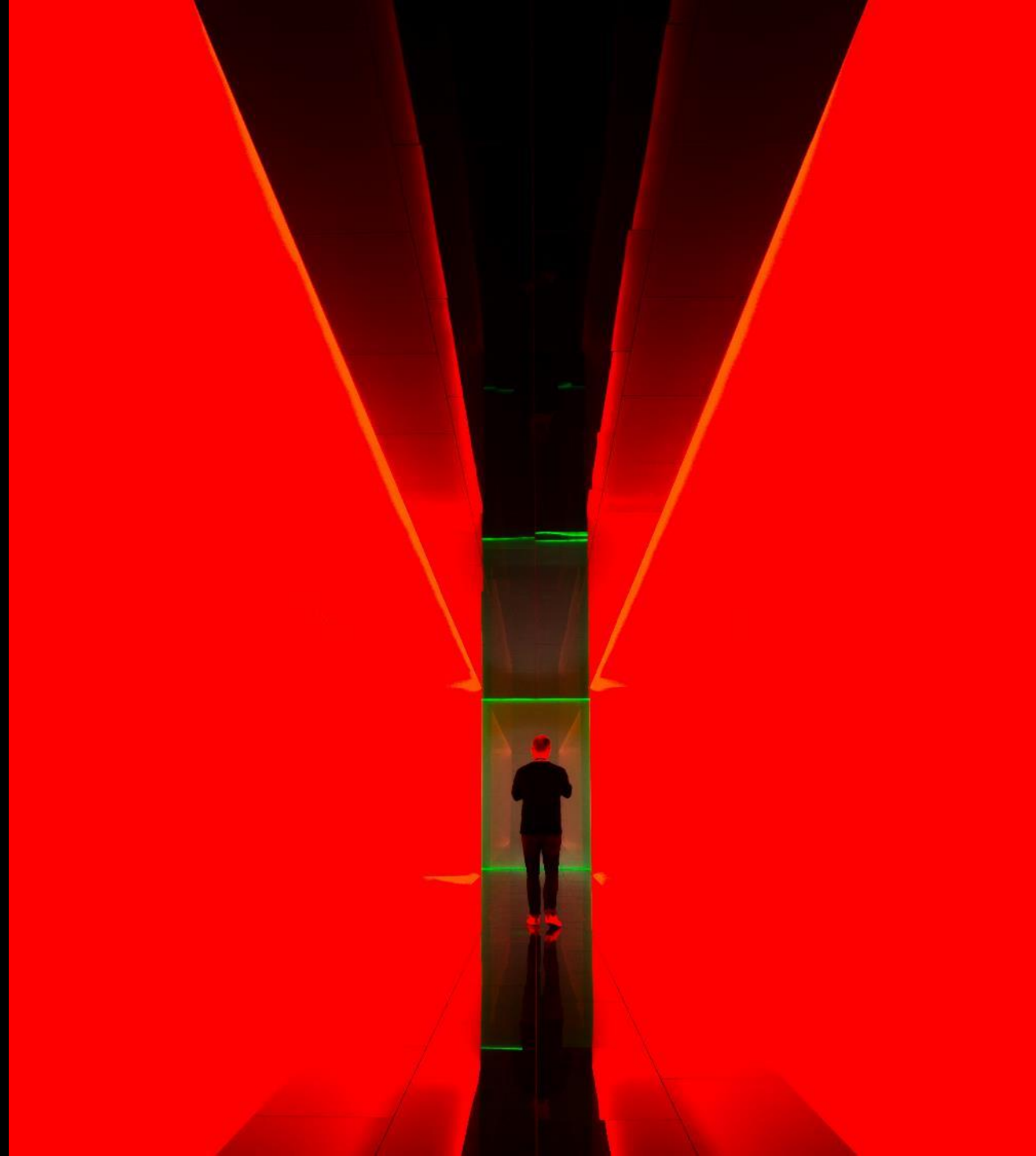
What is our risk appetite for AI?

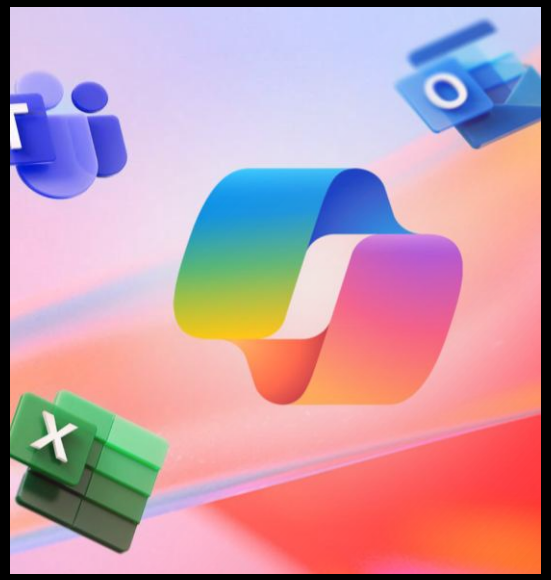
How do we prioritise investment?

MICROSOFT ALLIANCE

The WSP-Microsoft strategic alliance is built on a shared commitment to be catalysts for change in modernizing the AEC industry

February 2025



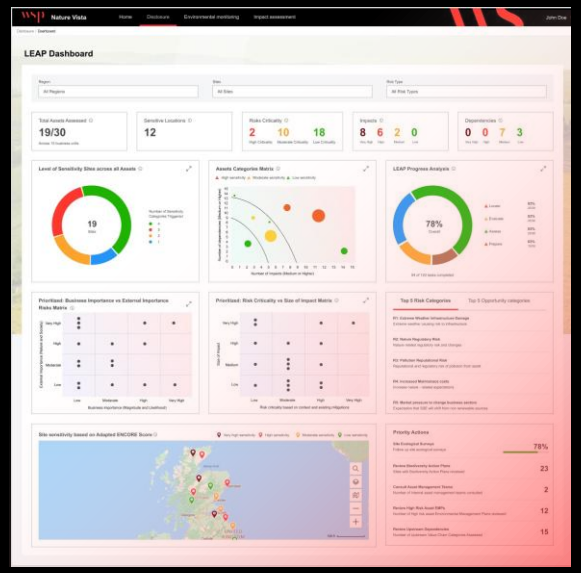


INDIVIDUAL AI

Copilots for all! AI tools that support employees with everyday tasks to allow them to focus on value adding activities.

ENTERPRISE AI

AI integrated into core business systems to analyse large datasets, predict trends, and optimise operations.



CLIENT SOLUTIONS

AI solutions embedded in services and platforms offered to clients, such as predictive modelling and design optimisation

Daisy

Multi-objective optimisation

Maximise building performance

Early-stage intervention with AI

Daisy – A parametric design tool to revolutionise early design

Make better decisions on your design from the start. Combining digital and AI with a core focus on sustainability and decarbonisation. Daisy brings a new way of looking at parametric design, by including it at the earliest stages of your project.

DAYLIGHT FACTOR

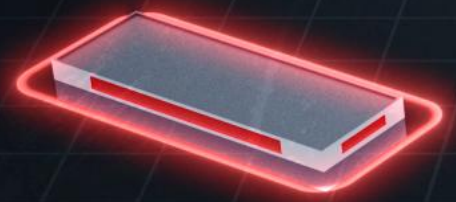
% of Floor Area

OPERATIONAL CARBON

$KgCO_2/m^2$

EMBODIED CARBON

$KgCO_2/m^2$

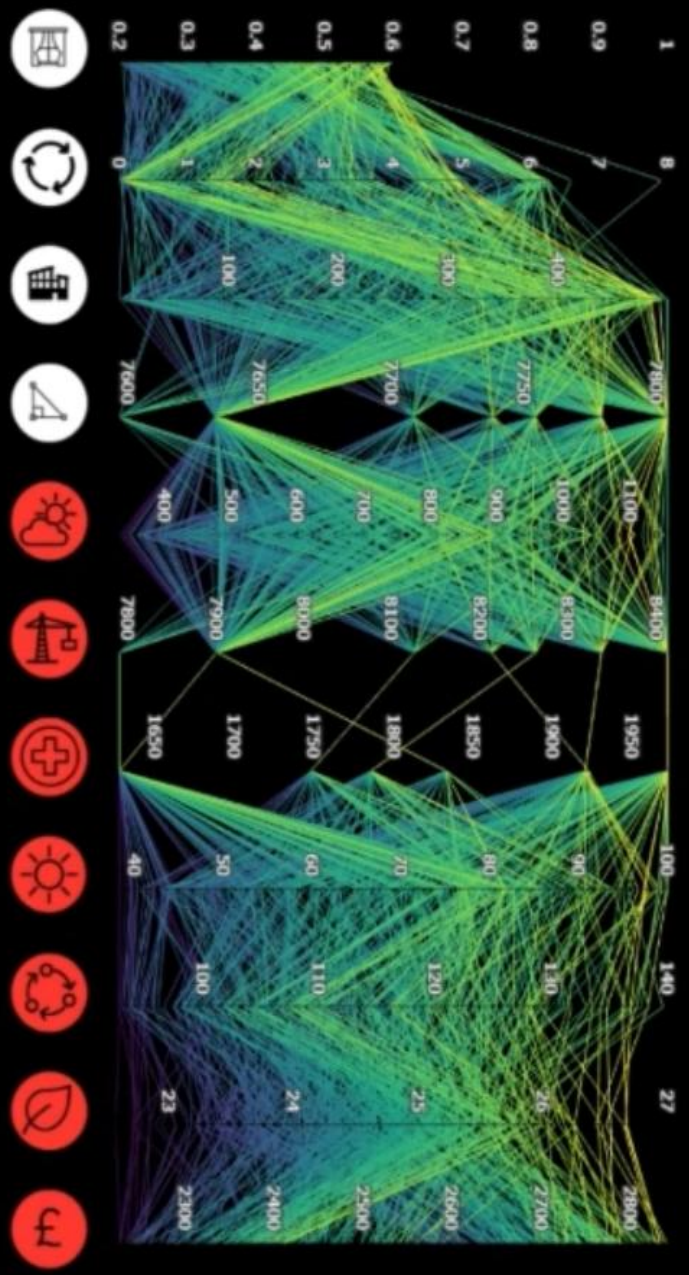


DAYLIGHT FACTOR

OPERATIONAL CARBON

EMBODIED CARBON

Filter | Selected Design | **Design Space** | Design Catalogue | Histograms

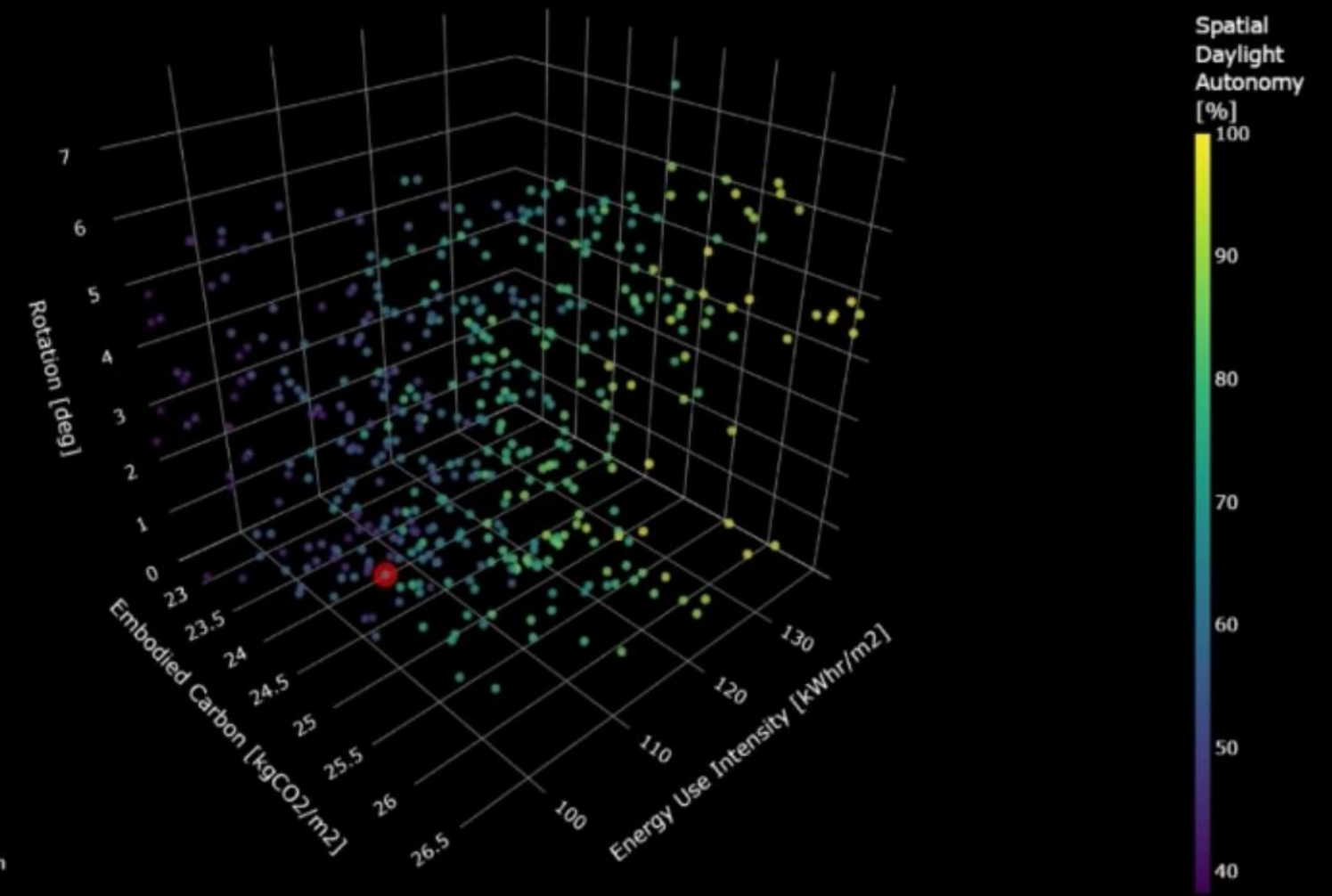


X-axis plotted feature: Embodied Carbon [kgCO2/m2]

Y-axis plotted feature: Energy Use Intensity [kWhr/m2]

Z-axis plotted feature: Rotation [deg]

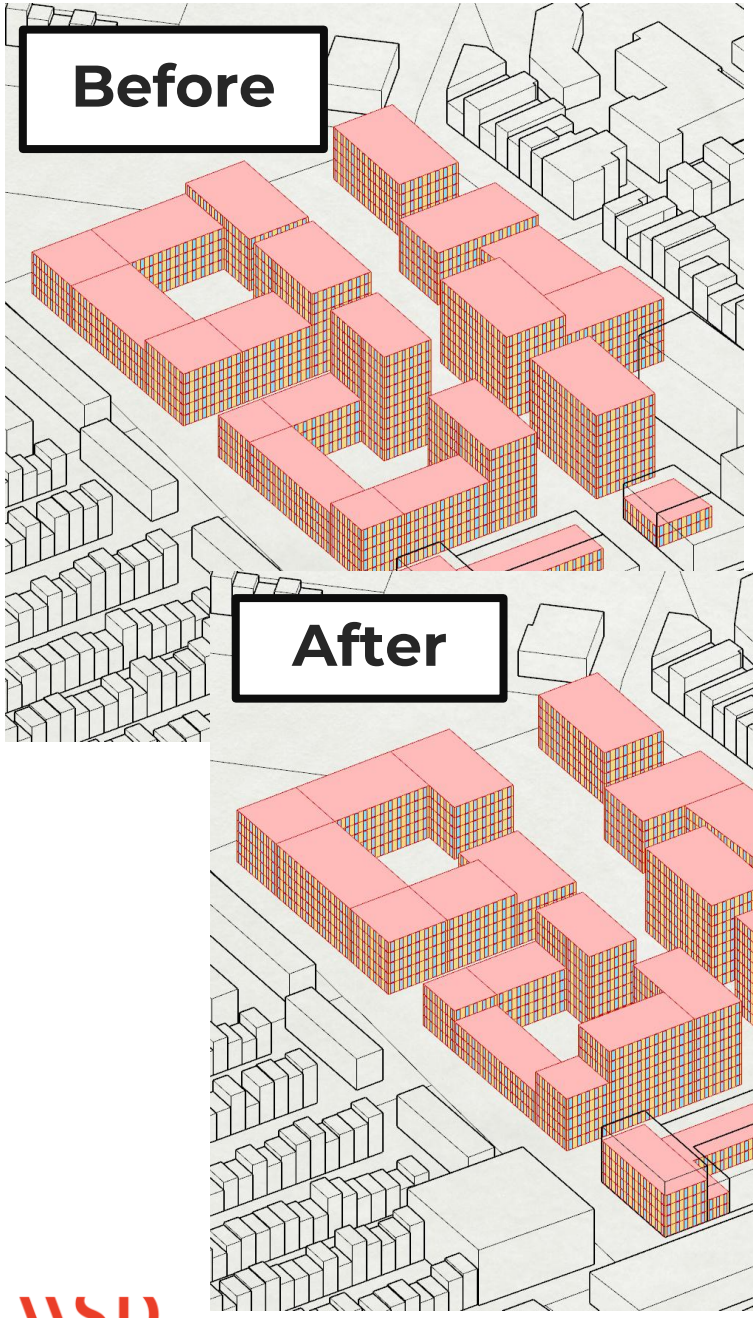
Color scale feature: Spatial Daylight Autonomy [%]

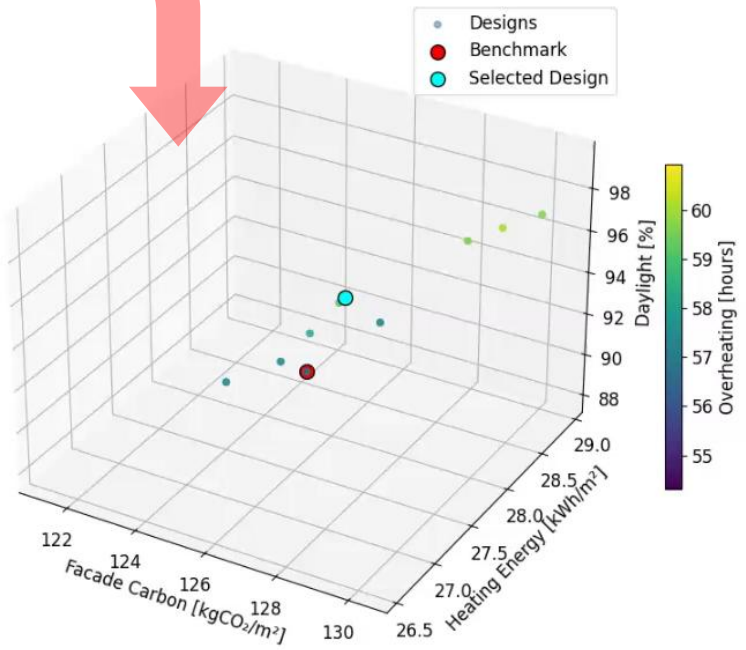


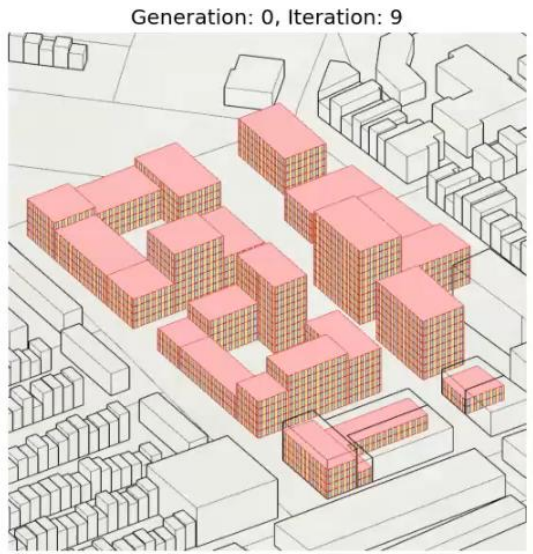
2d Mode

Invert daylight axis

Full site masterplan







182 tCO_2 Reduction

£420,000 savings (less façade area)

Reduce Heating Bills

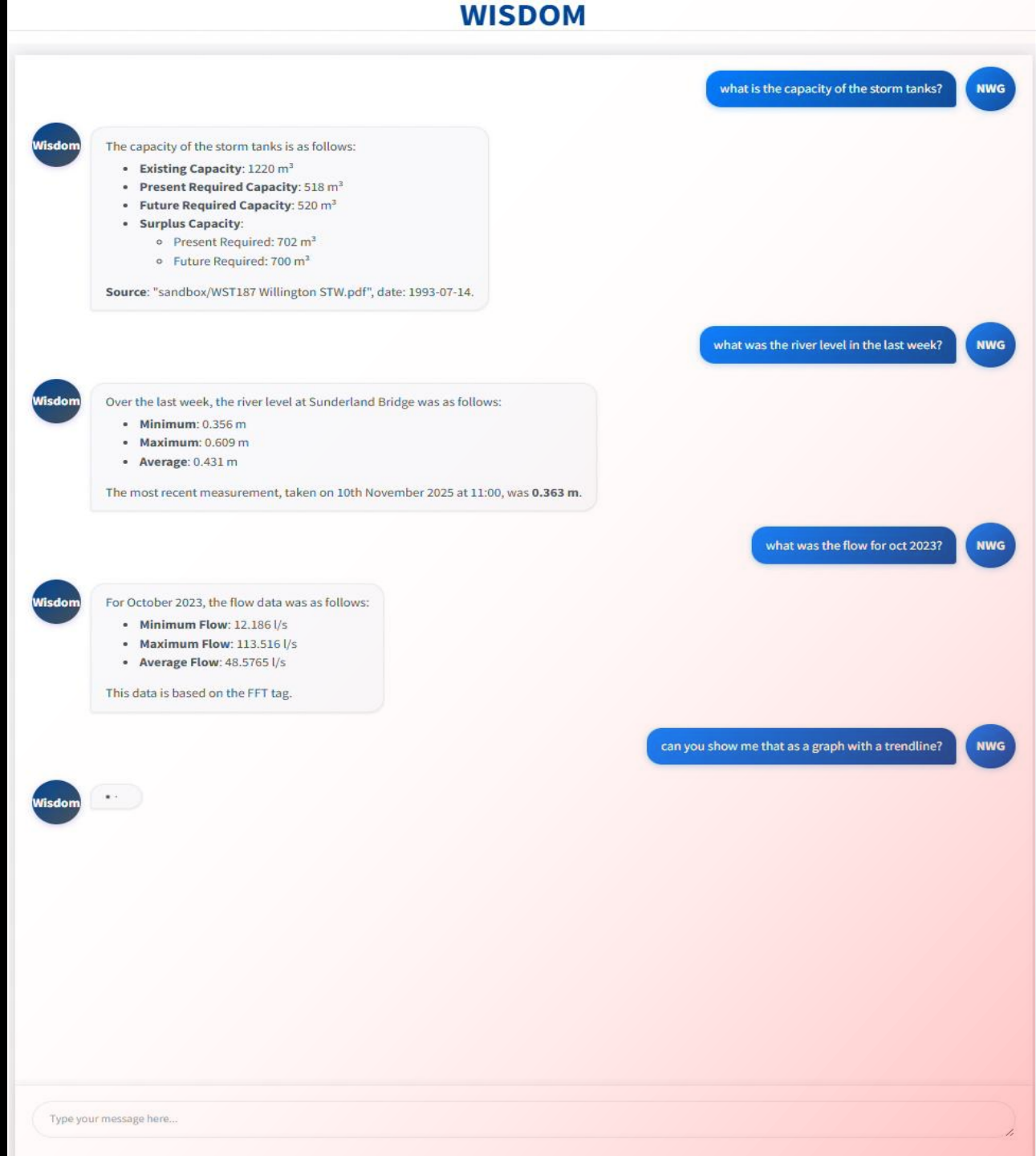
Reduce Overheating Risk

Maintain Access to daylight

WISDOM

Wastewater Insights for Standardisation, Delivery, Operation and Maintenance

WISDOM democratises access to operational knowledge and data

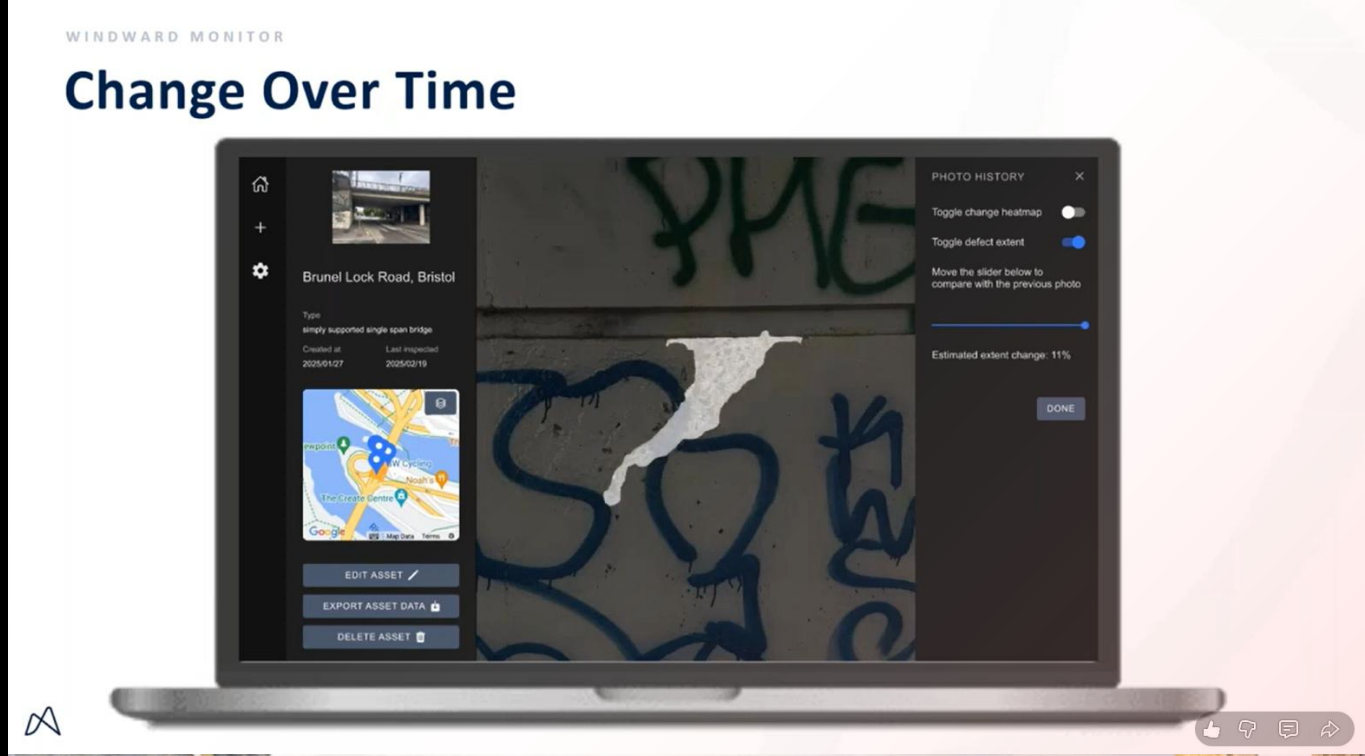


VISION AI

Traffic counting

Pathway fault detection

Detect and quantify defects



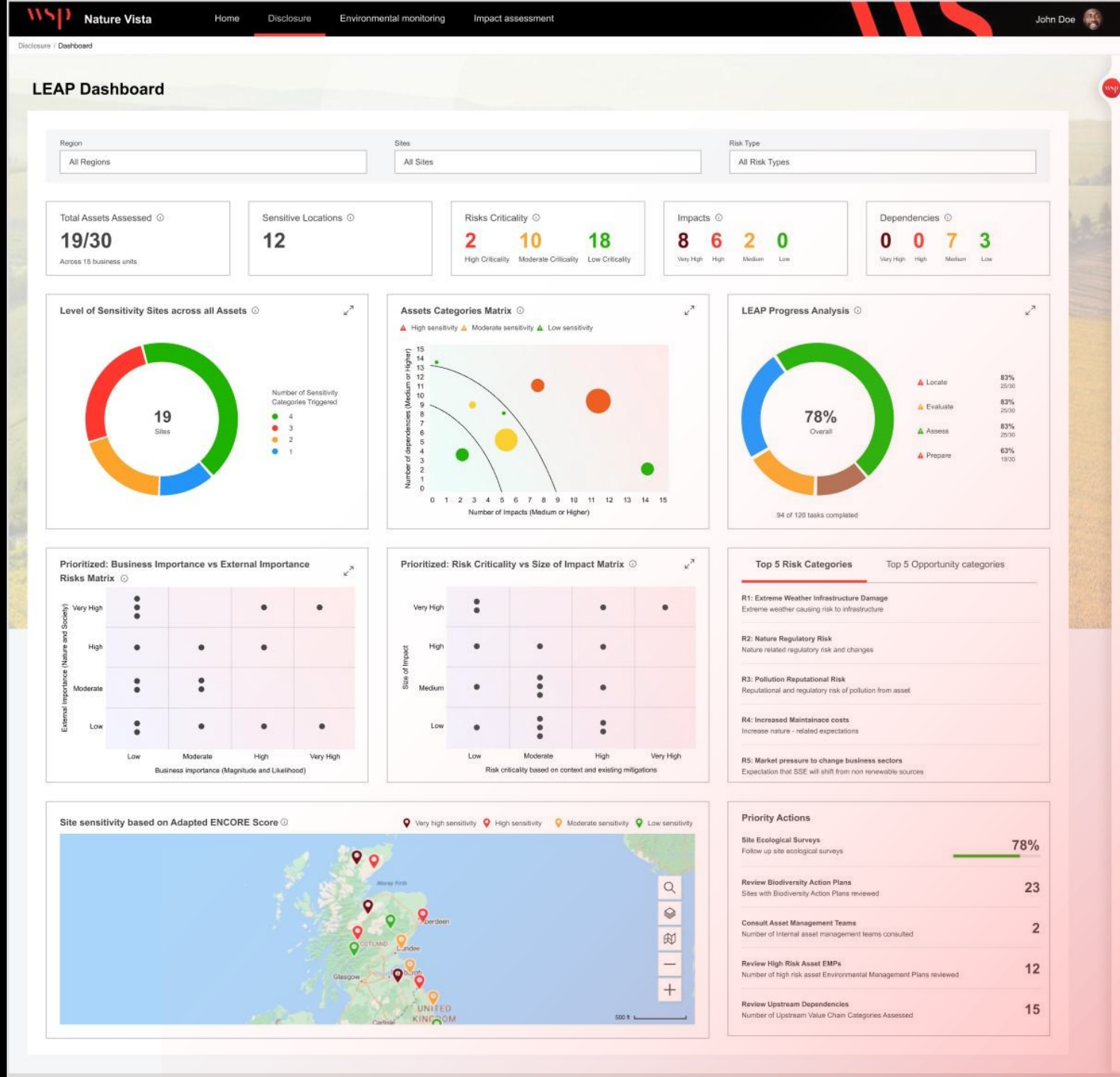
EXPLORE THE

NATURE VISTA

Discosure compliance

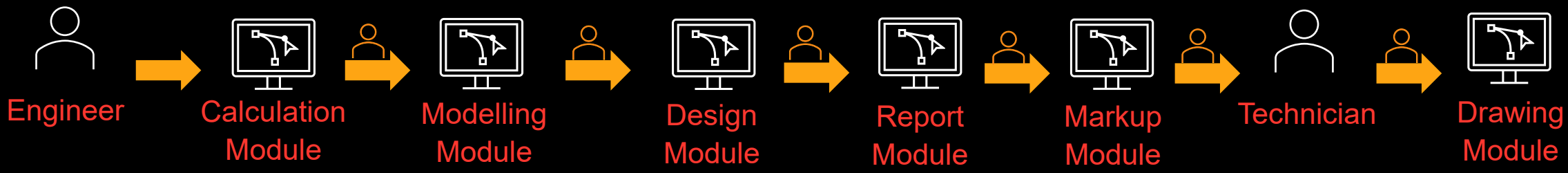
Streamlined EIA

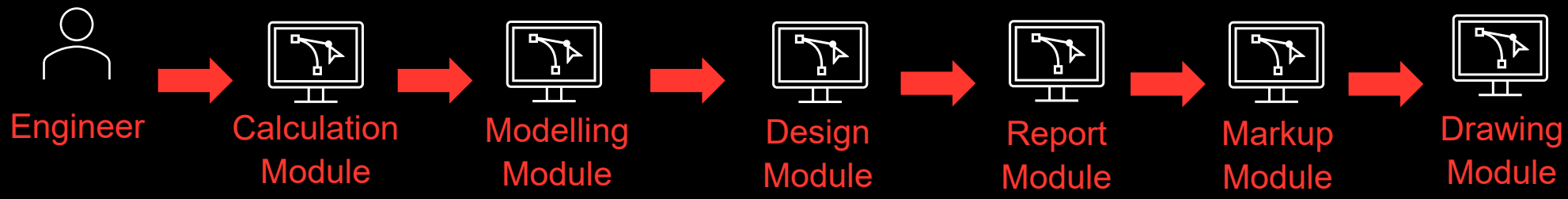
Evironmental monitoring



A NEW DESIGN PARADIGM?

Current design workflow


Engineer
Calculation Module
Modelling Module
Design Module
Report Module
Markup Module
Technician
Drawing Module


Engineer
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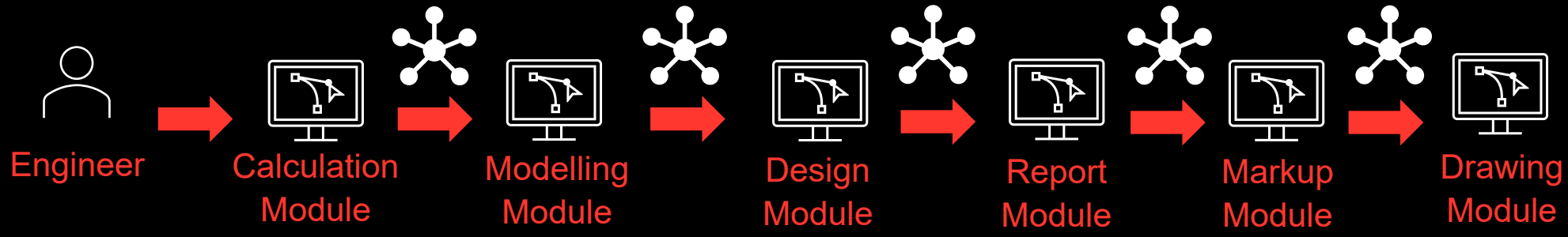
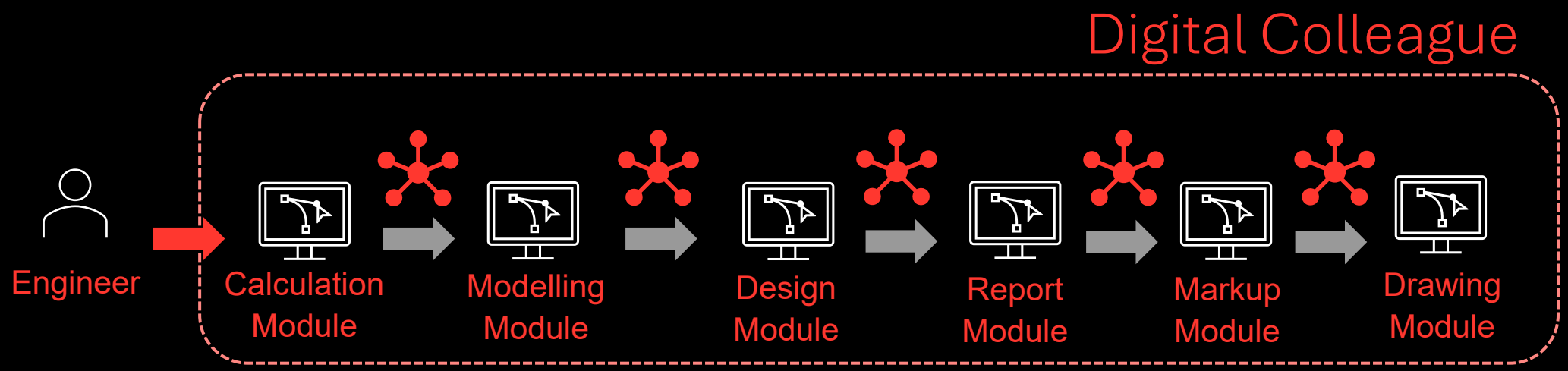
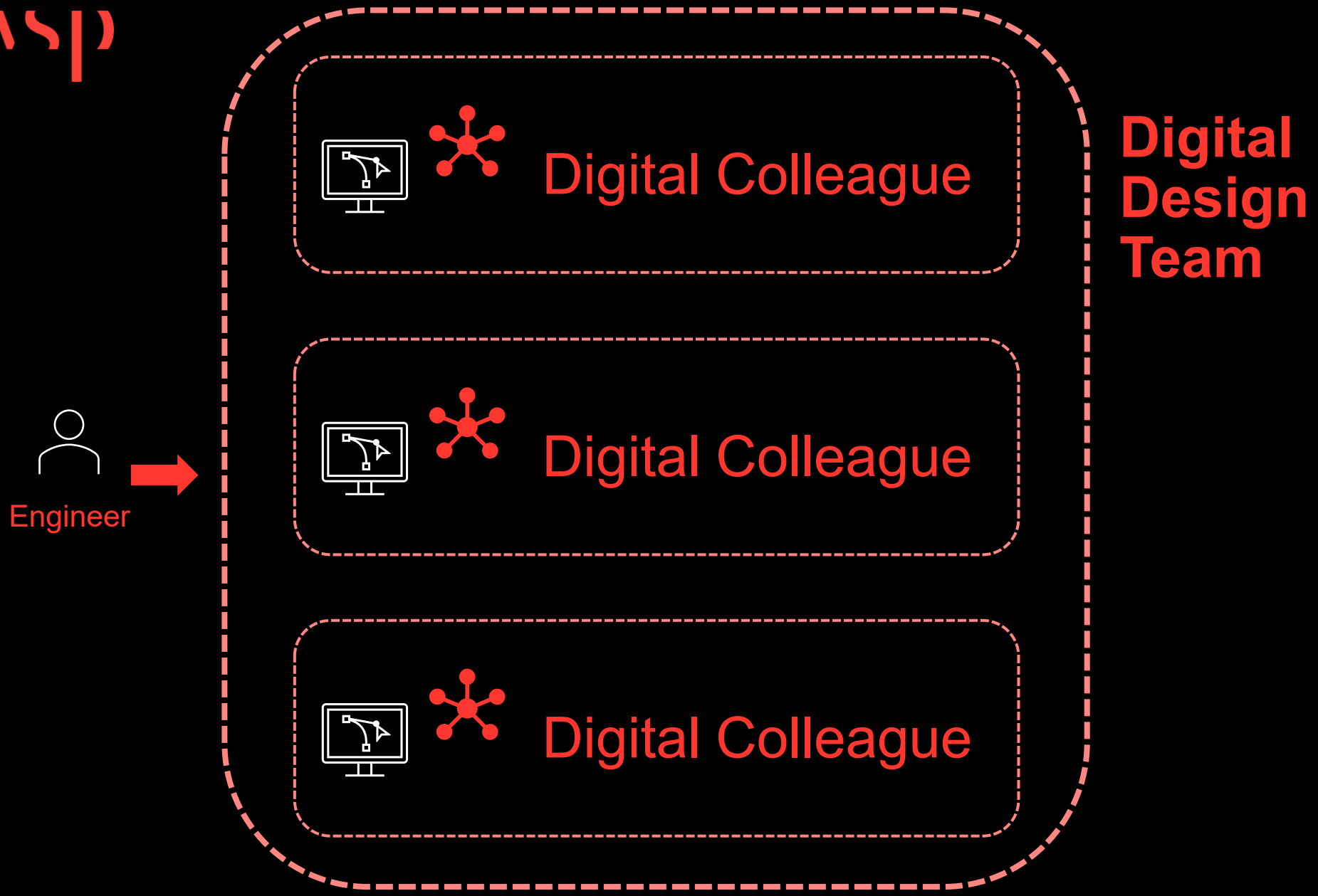
Drawing Module

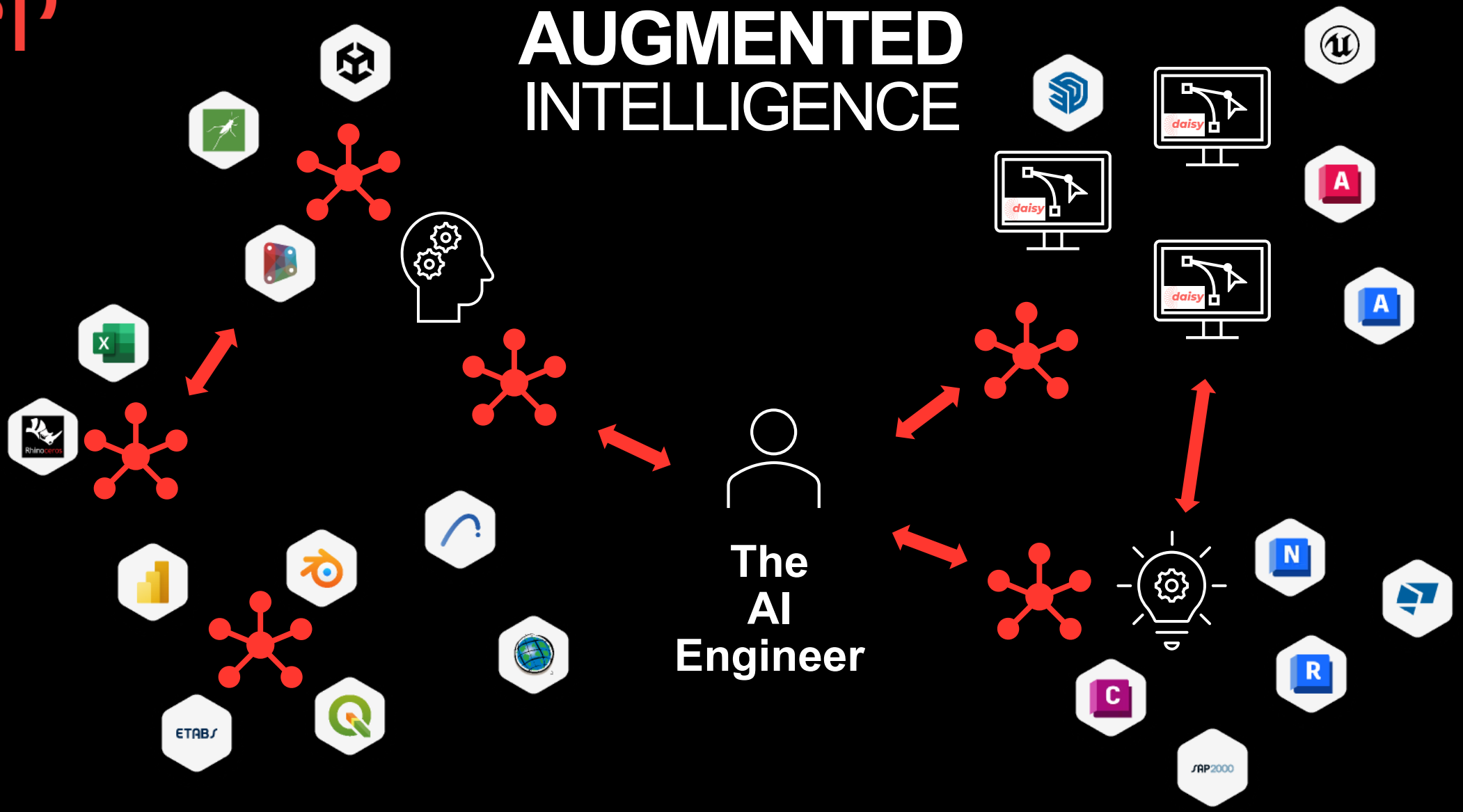

Engineer
Calculation Module
Modelling Module
Design Module
Report Module
Markup Module
Drawing Module


Digital Colleague
Engineer
Calculation Module
Modelling Module
Design Module
Report Module
Markup Module
Drawing Module



Digital Design Team

AUGMENTED INTELLIGENCE



Own a top-down AI strategy

Sanctioned AI or shadow AI, it’s your choice

Invest in your people, not just technology