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Simulators

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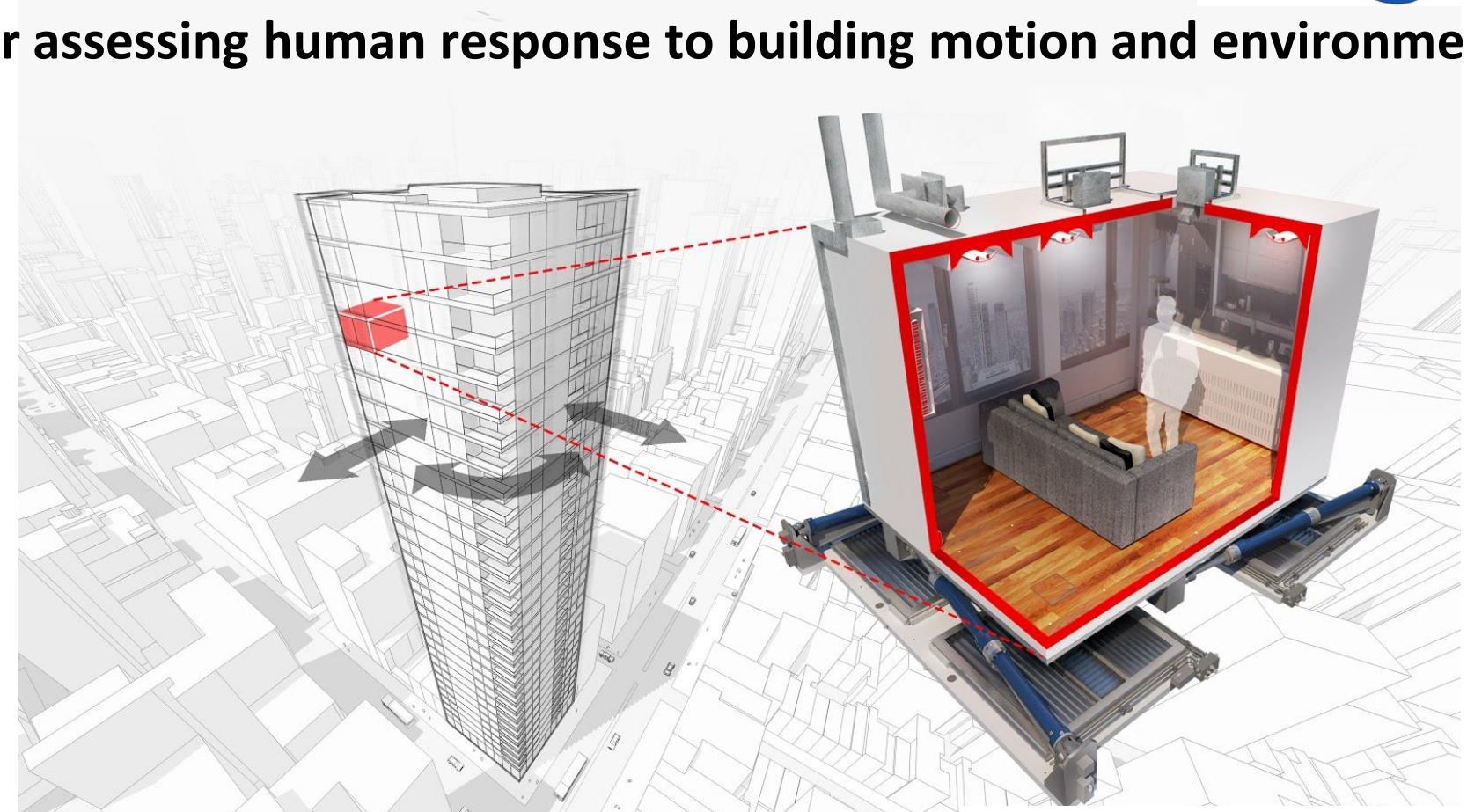
for assessing human response to building motion and environment



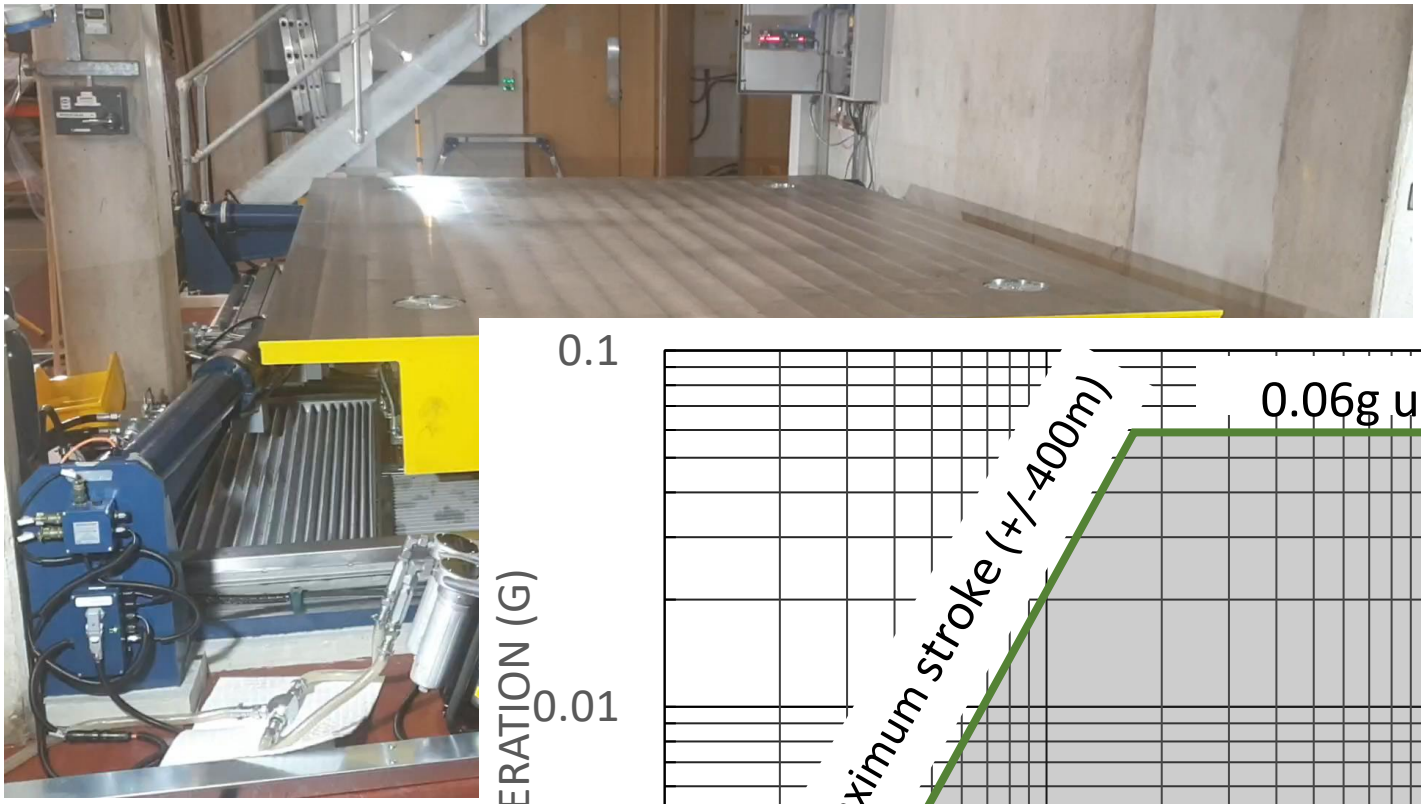
Low frequency, long stroke,
bi-axial motion +
Environmental chamber
+ Virtual Reality

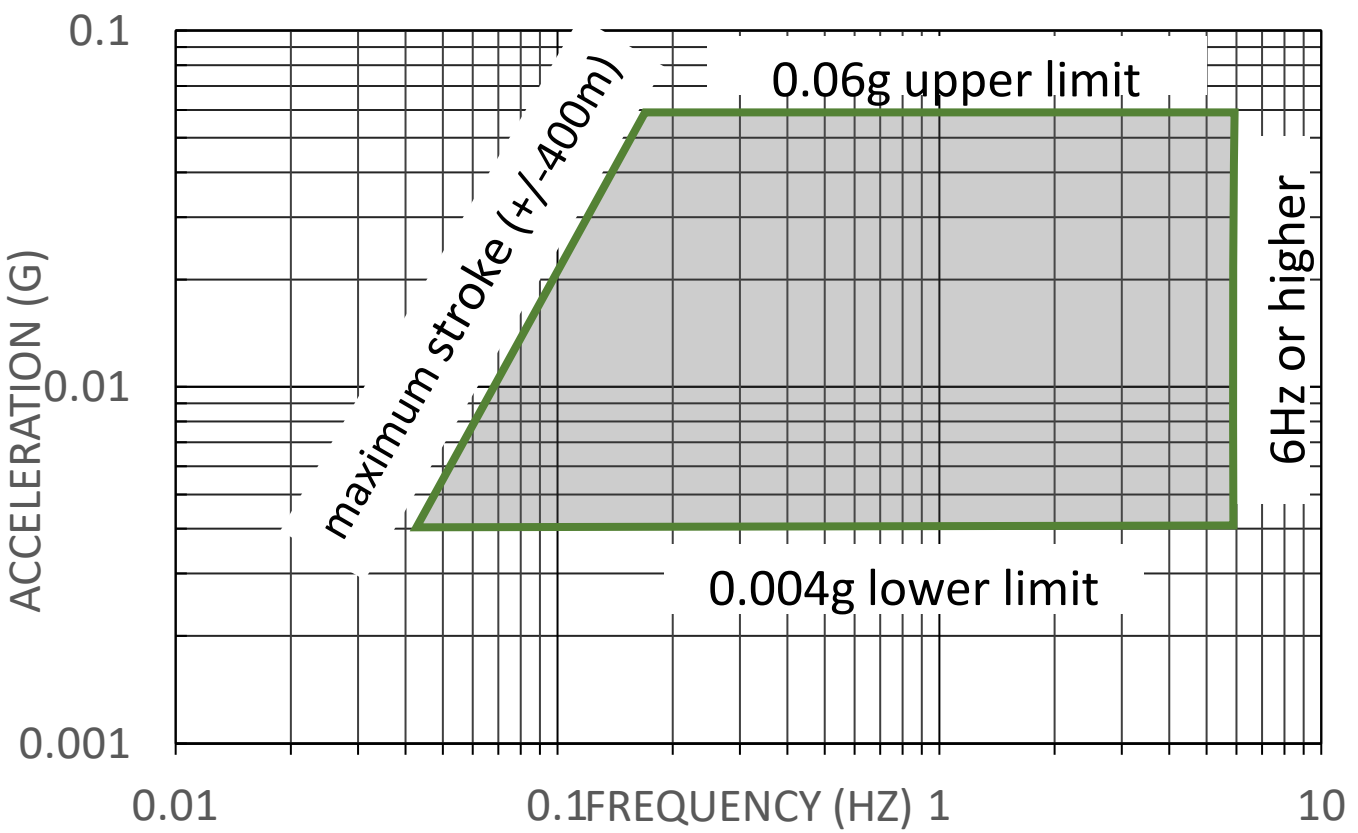
UKCRIC

University of Leicester

EPSRC
Engineering and Physical Sciences Research Council

2-DoF Motion platform





Simulators

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Environmental chamber

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Immersive 3D projected VR

PROI

Simulators

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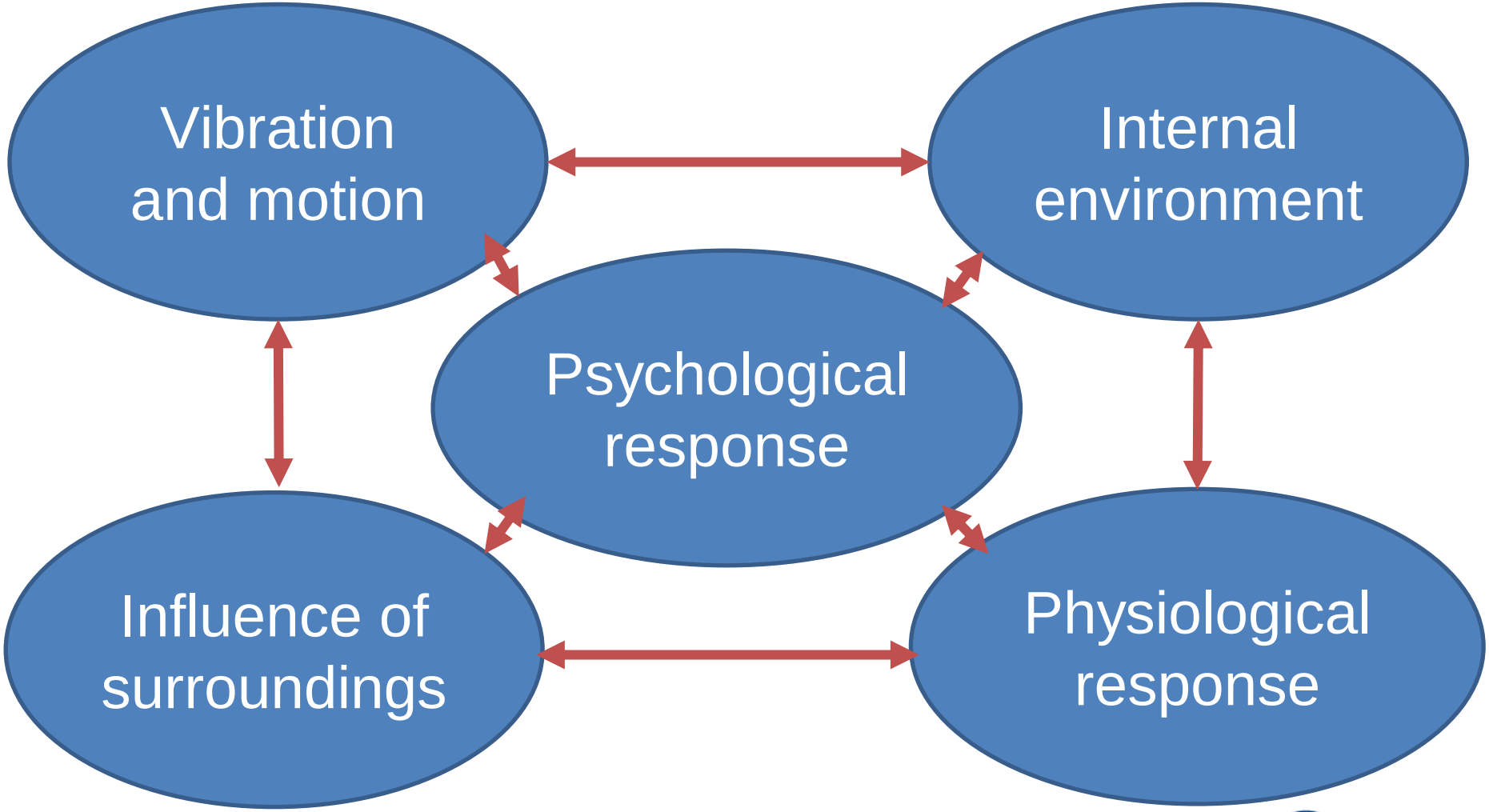
Explore links between motion, environment and human response



Simulators

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Allows exploration of human response

- How humans experience, interact with, and influence the environment they live and work in
- Acceptable vibration, sway, environmental characteristics
- Interaction between environmental factors
- Design sustainable buildings where people can be healthy and productive

VSimulators @Exeter

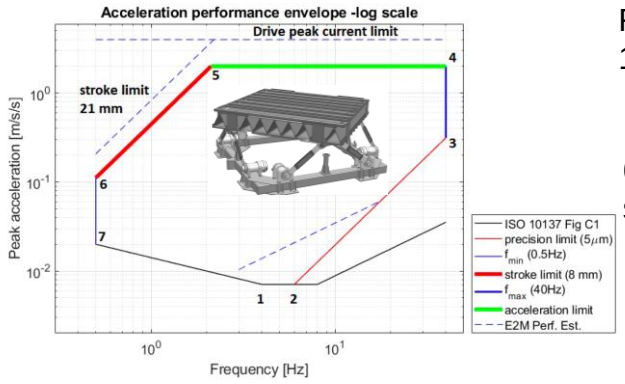
6-axis motion simulation with VR/mocap/force plate

(8m)^3 VSim chamber

Motion capture camera array

9 HTC Vive Pro virtual reality headsets

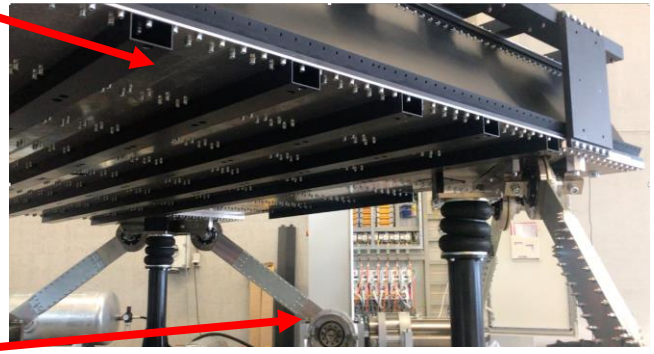
9-piece force plate –world's largest?



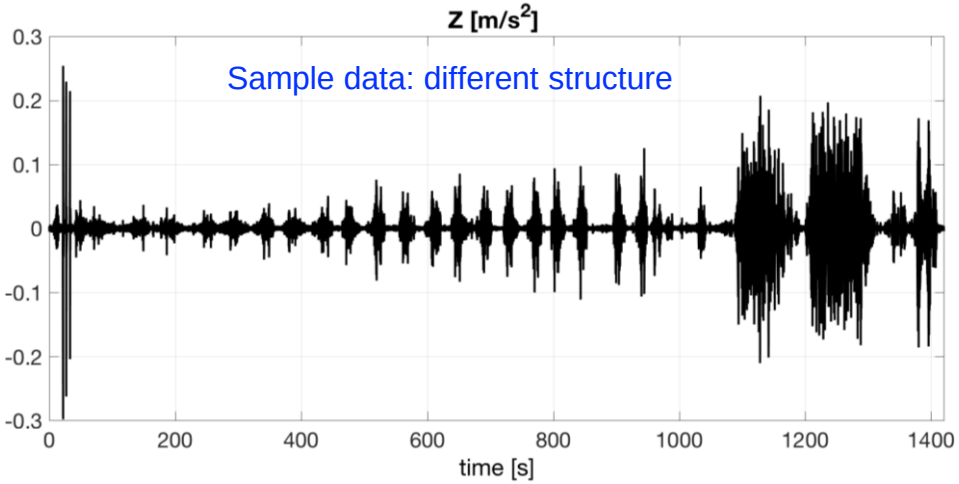
Rigid platform, 1 t payload

6-axis motion simulation

'Octopod' with 8 rotary stepper motors



Putting humans in the design loop
-because of limitaions in design guidance



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Some motion simulations

-for engineering and medical applications