### Understanding floors. Optimising logistics.

Floor Dynamics is a technology company with expertise in applied software and modelling for large-scale concrete floors.

We combine our knowledge of industrial floor construction, high-definition mapping and logistics insight, to provide a specialist package of optimisation services for warehouse floors. In an industry where time is money, we help distribution brands – and especially automated warehouses – to operate at peak efficiency; and help property developers to maximise their investment.

### A part of RCR Industrial Flooring

Floor Dynamics is part of RCR Flooring Services, a division of RCR Industrial Flooring. RCR comprises specialist flooring companies from across the globe, which together provide clients with a start-to-finish industrial flooring service. For more information visit www.rcrindustrialflooring.com.

## Floor Dynamics

Floor Dynamics is headquartered in the UK, with a strong international presence which can serve clients in every continent.

#### www.floor-dynamics.com



### BIM modelling

BIM (Building Information Modelling) is a widely adopted method for sharing information about a building's construction and services. It is not only for building design, but for operation and maintenance purposes throughout the building's lifetime.

With our high-definition mapping data we produce BIM-ready models of the floor, suitable for use in commonly used systems such as REVIT. These models can be used to update previous building records, or to aid future planning.



### Research

We are constantly exploring new technologies, software and algorithms to enhance floor measurement and an understanding of performance. We also welcome the opportunity to collaborate and to conduct research for clients.



# Remediation and handover reporting

When a building changes hands, or changes use, we can rescan the floor and compare it to previous datasets with precise accuracy. We use this to provide a dilapidation report, so that building owners can assess the wear and tear on the floor and take appropriate remedial action.





### Suspended beam deflection

We also conduct surveys of beams and suspended floors to measure deflection under loading - allowing building owners and structural engineers to understand and control the loading on mezzanine floors.

# **Floor** Dynamics

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### Helping MHE to work in harmony with the floor

Speed and process efficiency lie at the heart of today's logistics. Personalised, automated order picking and despatch are driving innovation and reducing lead times - and warehouse floors are under more pressure than ever before.

The flooring industry strives to create the flattest possible floors; and the distribution industry focuses on moving at speed across them. However, 'superflat' floors are hard to achieve; and even the best floors can deteriorate over time.

By combining flooring expertise with the latest technologies, Floor Dynamics enables materials handling equipment to work in harmony with distribution centre floors. This enhances process efficiency and delivers tangible time and cost benefits.

#### Our clients include:

- Major distribution brands who own and operate automated warehouses
- Property developers who offer clients a high-spec building and value-added service

### High Definition Mapping

Using the very latest in surveying and scanning technology, we undertake comprehensive, high definition mapping of warehouse floors. We identify surface undulations, abrasion and damage – anything which may impinge on the smooth and swift running of MHE.



Our HD maps provide an understanding of the unique 'fingerprint' of the floor, which is the first step towards optimising process efficiency. By gathering data to sub-millimetre precision we ensure accurate results, able to be interpreted clearly, and to sustain the utmost scrutiny.





### Data Analytics

HD mapping produces a vast bank of data. Without careful interrogation it can be confusing, and at worst misleading. We are skilled at identifying the key data characteristics that influence floor performance. We process and interrogate data, and present information in visual way that's easy to understand.



We can reference floor mapping data to any international flooring standard (for example, TR34, DIN18202, EN15620, ASTM 1155 and DIN15185), and to custom specifications. Our reports enable flooring consultants to quickly comprehend the floor's attributes, so as to provide reliable advice.

### **Floor Characteristics**

No matter how well constructed a floor may be, its characteristics will change over time. Daily wear and tear from MHE wheels and pallets can easily lead to areas of impact damage and surface abrasion.

We test and measure the floor properties which impact MHE performance, including:

- roughness
- gloss
- abrasion resistance
- coefficient of friction

Understanding these characteristics gives insight into how smoothly MHE can move across the floor, and where there may be issues that require remediation.



