

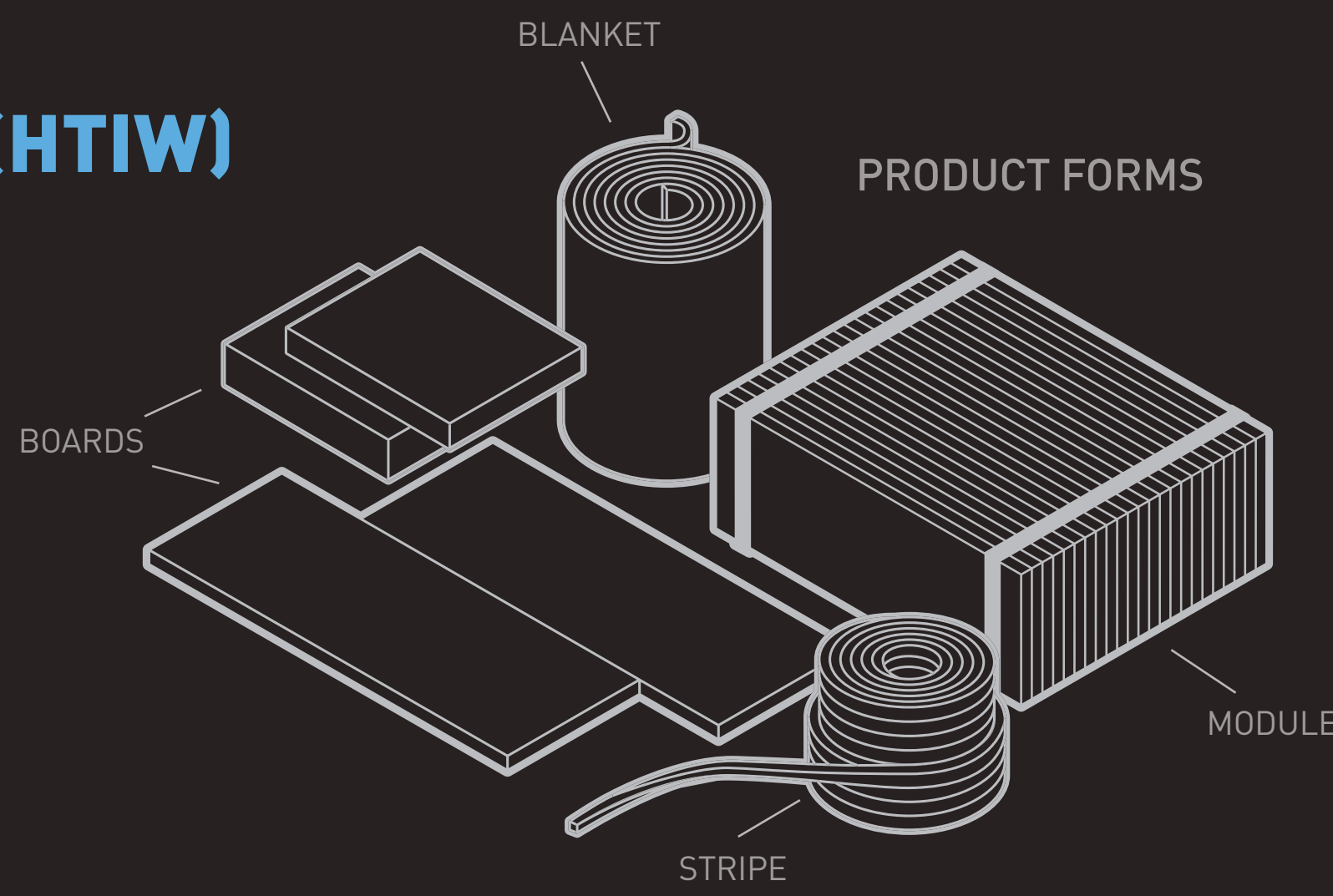


# CARE CAN HELP REACH CONTROL

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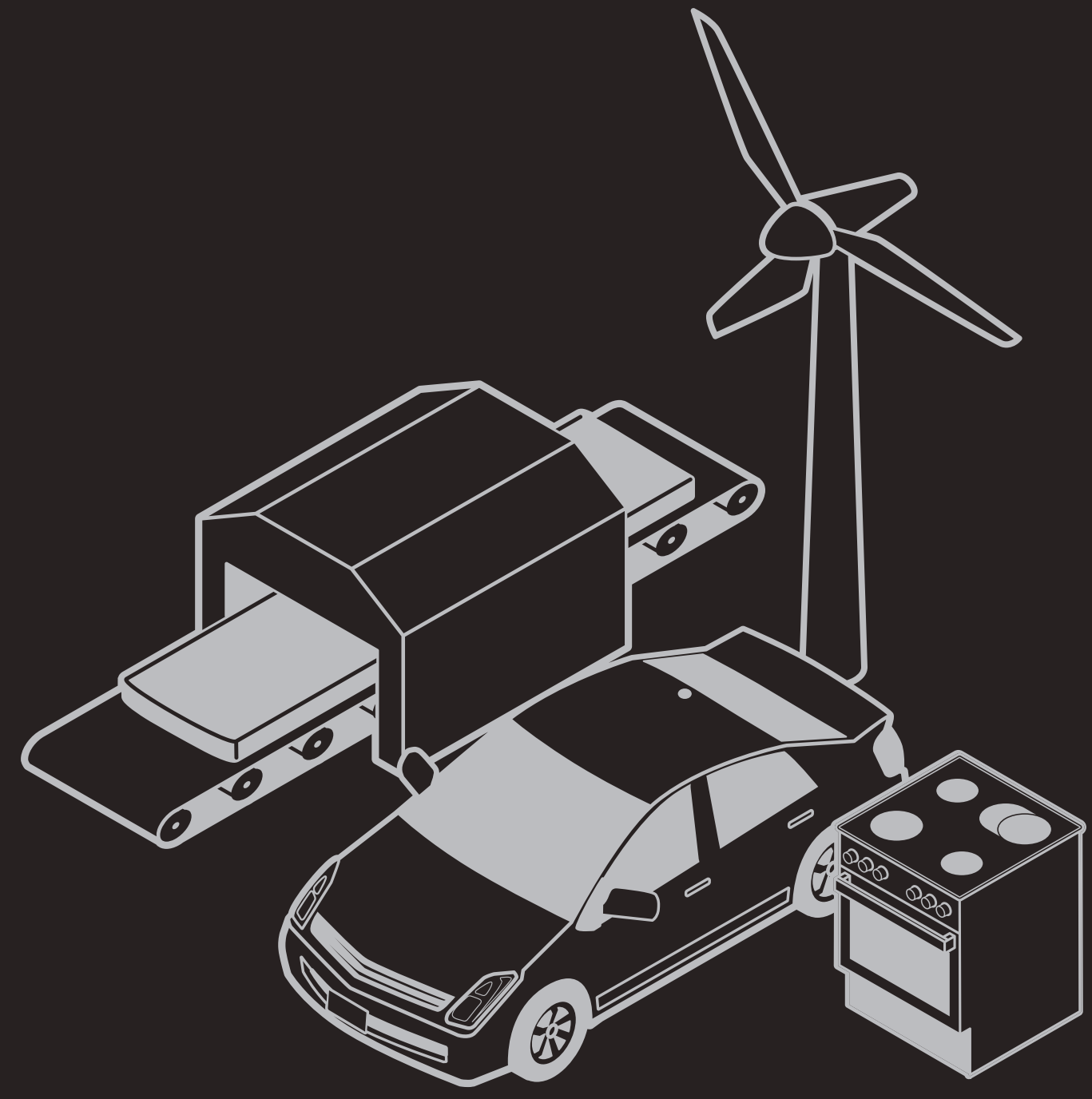
## HIGH TEMPERATURE INSULATION WOOL (HTIW)

- Inorganic synthetic vitreous and polycrystalline wools
- Defined by a classification temperature above 1000 °C
- Typically used at temperatures above 600 °C
- Necessary for many high-tech products owing to their versatile characteristics



## ECFIA

ECFIA, the European Association representing the High Temperature Insulation Wool industry, was founded in 1979. Its key objectives are to improve occupational health & Safety, to initiate and promote research and to disseminate information on health, safety and environment connected to HTIW.



## HTIW ARE USED IN HIGH-TEMPERATURE APPLICATIONS IN MANY KEY INDUSTRIES

- Ferrous and non-ferrous metals
- Glass and ceramic
- Chemical and petrochemical
- Automotive and aerospace
- Power generation
- Domestic appliances

## PRODUCT STEWARDSHIP PROGRAMME

ECFIA has a comprehensive Product Stewardship Programme (PSP) to provide employees and users with up-to-date information on proper handling practices for HTIW products, health research and exposure guidelines.



## CARE PROGRAMME

ECFIA members proactively developed and implemented the CARE ("Controlled and Reduced Exposure") Programme as a part of their PSP in 1996. The CARE Programme consists of: workplace monitoring, workplace concentration assessments, study of workplace controls. It is designed to evaluate, measure, control and reduce occupational exposure to airborne fibrous dust. In the last 15 years ECFIA has been able to create a comprehensive database of effective engineering controls and handling practices.

## WORKPLACE MONITORING

Workplace measurements are taken within the European HTIW manufacturer and customer facilities. A statistically based stratified sampling programme was devised to collect representative data. Selected individuals are monitored, with separate filters for each task, for an entire shift. An independent third party statistician randomly selects those customers to be monitored each year.

## FUNCTIONAL JOB CATEGORIES

Work with HTIW has been classified into Functional Job Categories (FJC). These are sampled at a frequency proportional to the number of workers employed in each job:

- HTIW production – in manufacturing only
- Finishing – sanding, sawing, routing
- Installation – lining furnaces with HTIW, fitting, tamping, wrapping and hardware installation
- Removal – furnace maintenance, furnace wrecking, mould knock-out, clean up and disposal
- Assembly – encapsulation, lamination, sewing, cutting
- Modules – producing blocks of compressed HTIW
- Mixing/Forming – adding HTIW to mixing tanks, wet forming of shapes and boards
- Auxiliary – supervision, shipping, passive exposure when using equipment containing HTIW
- Other (not elsewhere classified) – textile, automotive

## CARE AND REACH

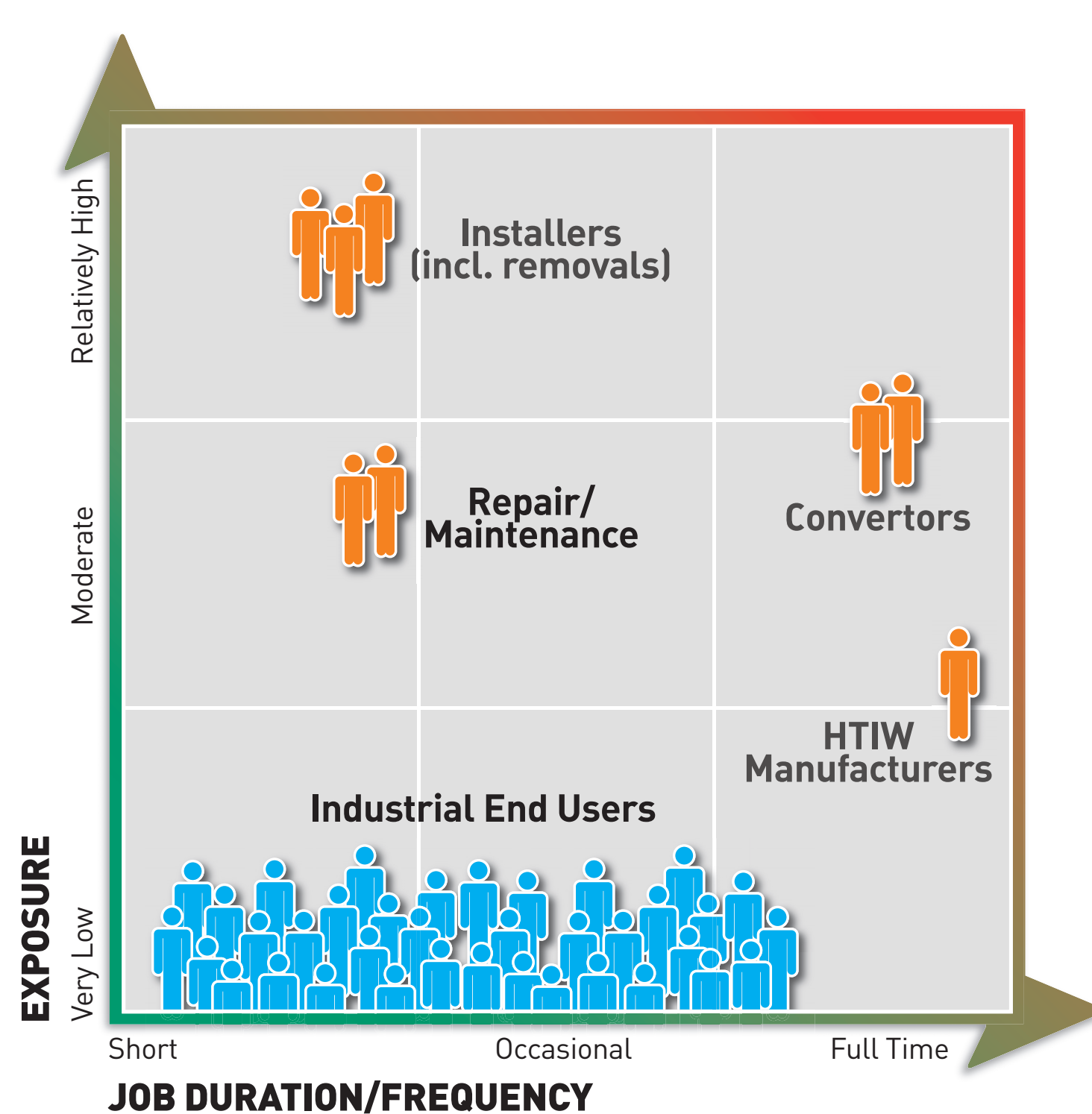
With the advent of REACH these CARE job categories were used to develop the exposure scenarios for the registration of Alumino Silicate Wool (also known as refractory ceramic fibres), one type of HTIW. The CARE data was used to indicate the level of risk management measures (RMMs) required to provide adequate controls for various operations that are carried out by workers.

## ADDITIONAL GUIDANCE

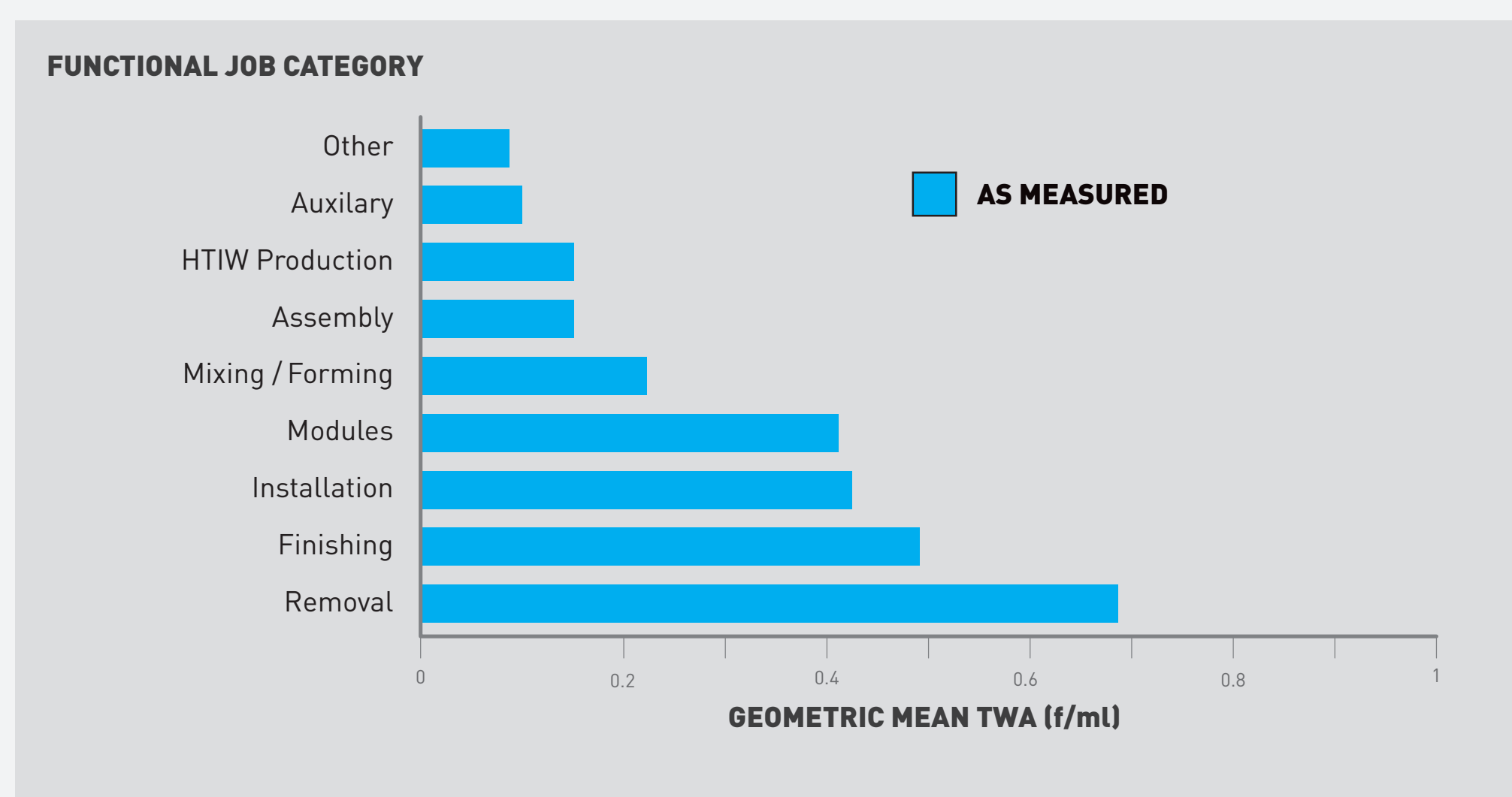
In addition to the exposure scenarios ECFIA has produced a series of guidance documents for a number of different HTIW end user tasks, to help users implement appropriate risk management measures to control and reduce exposure to fibrous dusts.

## RESULTS

The CARE data enabled ECFIA's experts to identify applications where exposures to HTIW fibrous dust are likely to be encountered and provide practical advice for limiting these exposures.



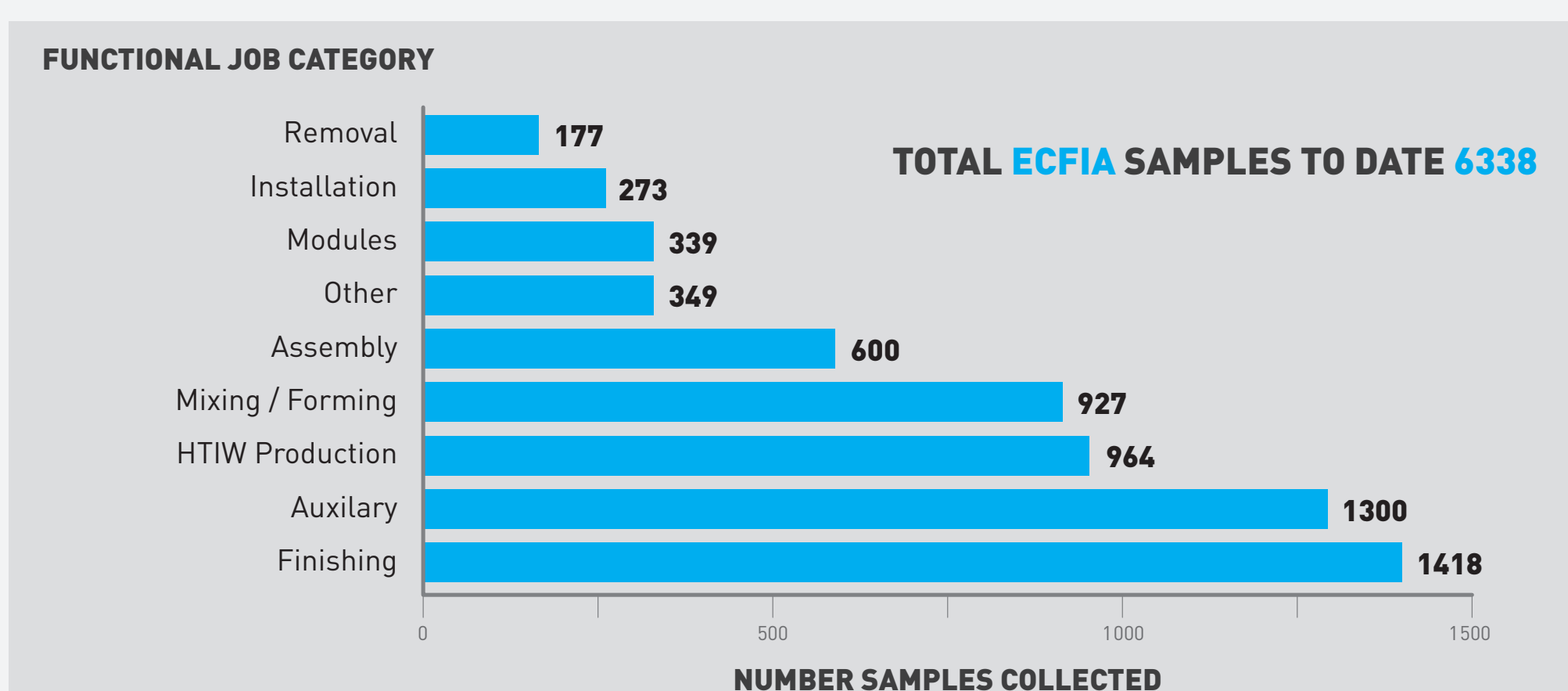
## FOURTEEN YEARS' DATA



Collected data indicate that there are significant differences in workplace exposure among job categories and among tasks within jobs categories.

## TOTAL SAMPLES IN CARE DATABASE

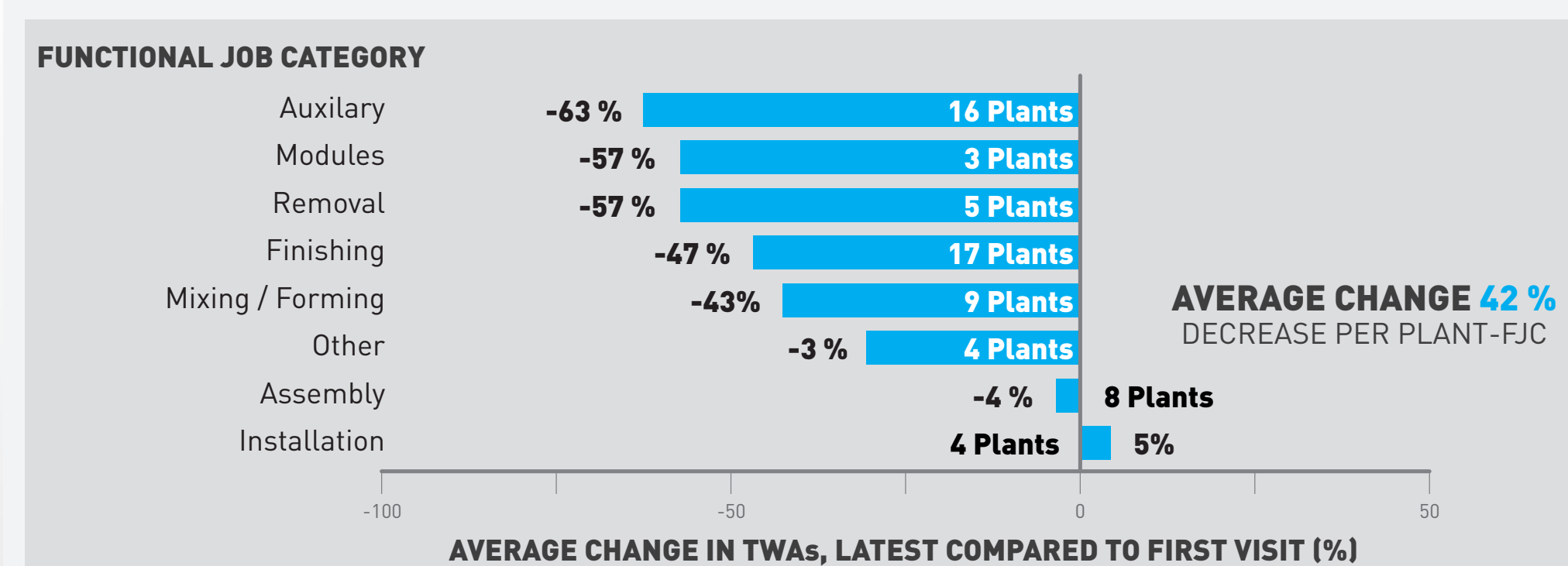
EXCEEDED 6300 TWA | SAMPLES IN YEAR 14



The PSP is worldwide in scope and has collected approximately 20,000 TWA measurements since it began. For Europe, 6,338 TWAs have been collected to date within the CARE Programme.

## AVERAGE CHANGE

IN MEASURED TWAs ON REPEAT VISITS FIRST VISIT COMPARED TO MOST RECENT VISIT: 42% AVERAGE DECREASE



Results to date demonstrate that occupational exposures have decreased over the years since the CARE Programme was first initiated. In more recent years, exposures appear to have stabilised, suggesting that the practical limits of control may have been reached.

## CONCLUSION

CARE IS AN EFFECTIVE TOOL TO SUPPORT REACH REQUIREMENTS ALLOWING THE EUROPEAN MANUFACTURERS TO USE REAL OCCUPATIONAL MONITORING DATA ON WHICH TO BASE RMMs RATHER THAN USING EXPOSURE MODELLING METHODS WHICH ARE OFTEN NOT SUITABLE FOR ASSESSING FIBROUS DUST EXPOSURE.

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