Rentokil in ten facts

1. Rentokil is the most international pest control company - operating in 66 territories, leaders in 47, particularly emerging growth markets.

2. Rentokil delivered revenues in pest control of £740m in 2014 up 8.5%.

3. Rentokil is the world’s most famous pest control brand.

4. Rentokil has world-leading scientific expertise, deployed through industry-leading training.

5. Rentokil operates a lean, repeatable model – using latest technology to service customers efficiently.

6. Rentokil mainly provides services to commercial customers who represent almost 80% of revenues. Residential pest control, mainly in North America, Australia and the UK, represents about 20% of revenues.

7. Rentokil has a strong pipeline of innovations, particularly in the key areas of rodents and insects.

8. Rentokil is creating significant leverage through its M&A capabilities.

9. Rentokil sees economic activity, urbanisation, population increase, demographic and rising middle classes as drivers of growing demand for pest control services.

10. 2015 is the 90th anniversary of Rentokil – a proud heritage of 90 years of service.

“Pest control is a large and attractive industry offering sustainable, long-term growth prospects.”

Andy Ransom
CEO of Rentokil Initial
Welcome to this Rentokil report on the global pest control market. We believe that no other company is better placed than ours to provide you with informed insight and commentary about the global trends, growth drivers, competitive positions and innovations which make up this great industry.

We estimate that the global pest control market is worth around £10bn per annum. This is a large and attractive industry offering sustainable, long-term growth prospects. Details about the key drivers of growth can be found throughout this report.

The industry covers a vast array of pests, some unique to certain countries or climates, while others such as rodents are present in every country around the world.

One of the great things about this industry is that pests will always be with us and that, as we come into contact with species which previously have not affected us or bothered us, there will be new opportunities for the industry. Pests are also of growing significance to public health. According to the World Health Organisation, urban pests are a growing threat to public health given changes in climate that favour their development. You may also have seen some NHS data published recently showing an increasing number of people going to hospital in England because of insect bites and wasp stings – now over 5,000 per year.

Many industries have ‘zero tolerance’ towards pests. To ensure effective prevention of these unwanted visitors, customers agree a contract to protect them from the dangers of pest-bourne diseases. With a large contract base, unlike retail or many other business sectors, pest control companies, like Rentokil, don’t start on the 1st January of each year on zero revenues. This is one of the many reasons that set the pest control business apart from other sectors. We are also a portfolio business, so retention and upselling play crucial roles in delivering growth. See ‘Fact File’ on page 6.

Clearly, effective pest control is a necessary, not a discretionary, service. The monetary impact of a pest infestation can directly affect a business’s bottom line but the negative impact goes far beyond the financials. A company’s reputation, its customer relationships and the retention and workplace satisfaction of its employees are all at stake. You don’t want to leave your reputation in the hands of amateurs.

Fortunately, the pest control industry is full of professional, hard-working people, focused on doing a great job for their customers. I’m proud to say that at Rentokil, we have the finest training and professional development programme in the industry. On-going training focuses on safety, service effectiveness, technical excellence and the use of new innovative products. See ‘Pest Control Industry’ on page 8.

There is a strong, scientific backbone to what we do. For instance, finding smarter, more effective ways to control rodents has been a major focus for Rentokil, particularly in light of new EU legislation on the use of rodenticides in outdoor areas. We have developed RodentGate which is our patented rodent trap that controls access to the rodenticides. It is hugely effective and after a very successful launch in Germany is now set for rollout across our markets. On page 22, you can read more about RodentGate and find out more about our unrivalled Global Technical Centre where much of our development work takes place.
What drives growth in demand for pest control services? Undoubtedly economic activity is a major factor. More businesses, greater levels of house building (termite control for instance) and higher office occupancy drive a need for pest management, but other factors such as new legislation, climate change, urbanisation, population increases, demographic change and growing middle classes in emerging markets are also driving demand. See ‘Growth Drivers’ on page 10.

Demand for pest control services is increasing across our major markets. But while we see markets developing at a macro level, our focus is often local. Rentokil is a multi-branch network business with local teams building long-term customer relationships. One of our core operational objectives is to build scale locally – increasing route density and so driving profitability.

We estimate that the pest control industry has 40,000 companies worldwide, of which about half are in North America. Industry consolidation is an on-going market dynamic. We have an excellent M&A capability at Rentokil and manage effective integration processes of those companies brought into our business while maintaining the highest standards of customer service and employee satisfaction.

This is an exciting time to be in pest control. We see multiple drivers of growth worldwide, we believe we have highly skilled and expert operatives in the industry, new innovations are constantly raising standards for control and protection, and an increasing middle class has a growing intolerance of pests and their associated diseases. The industry has come through the global recession well, fitter and better able to deliver the growth in profitability and high levels of cash that investors expect.

Rentokil is the global leader in pest control - we are a market leader in over 47 territories with the most powerful pest control brand in the world and with best-in-class digital technologies.

When people think of pest control, they think of Rentokil.

Andy Ransom
CEO
Rentokil Initial plc

“When people think of pest control, they think of Rentokil.”
Fact File

Global pest control market

$14.4 bn in 2014
Expected to reach $18 bn by 2019, growing at a CAGR of over 5%*

$7.67 bn in 2014
Growing at a CAGR of 4.92%*

North America is the world’s largest pest control market

40,000 pest control companies in the world, 50% based in North America

Type of pest control

- Commercial: 45% of the market
- Residential: 35% of the market

Termites account for about 20% of the global pest control business, causing an estimated $40 bn in damages per annum

Key geographies:
- North America - 50%
- Europe - 20%
- APAC - 20%
- Rest of the world including MENAT & LATAM - 10%

*Source: TechNavio Analysis
There will always be pests - and they are of growing significance to public health.

Andy Ransom, CEO of Rentokil Initial plc
The Pest Control Industry

The Pest Control industry delivers essential services that protect and enhance public health. It provides services to residential customers as well as commercial and public sector organisations. Its primary function is to maintain hygienic surroundings, free of pests that could hurt commercial interests and reputation, or endanger public health.

Pest control contracts typically specify a certain level of preventative work to be carried out, such as the number of visits to be made to each site. Reactive enquiries for one-off jobs require quick and efficient treatment for a specific issue.

Rentokil does not include agricultural pests, marine pests or large scale vector control in its definition of pest control, however these may become opportunities for the future. ‘In scope’ are those pests which will always threaten public health, including:

- **Rodents**
  - Rats
  - Mice
- **Other insects**
  - Cockroaches
  - Bed bugs
  - Ants
  - Wasps
- **Termites**
- **Other wildlife**
  - Birds
  - Snakes
  - Fleas
  - Foxes
  - Squirrels

**The role of a pest controller**

Pest control technicians identify, control and eliminate pests. This will involve:

- Inspecting customer premises on an agreed schedule and reporting their findings
- Advising customers on preventative measures or suitable methods of treatment
- Undertaking a programme of treatments using pest control equipment or chemicals to control and eliminate the target pests
- Reporting on all inspections undertaken, detailing the programme of treatments and chemicals used on the premises to maintain health and safety
For larger premises or infestations, a pest control surveyor or technical specialist may be called upon to provide an initial report and recommendations.

Technicians deliver services through the day and can be on call for out-of-hours emergencies. They are self-sufficient, but their productivity is greatly improved through routing tools, density planning and smart scheduling.

Maintaining the highest standards

It is essential that pest control technicians have up-to-date training in the latest techniques, tools and safety guidelines; high levels of pest knowledge such as understanding rodent behaviour; and local insights (for instance where a large building project is likely to disturb rodent nests).

The Rentokil Technical Academy delivers professional industry-accredited training to service colleagues through coordinated training courses, Technical Performance Assessment training and support through the Technical Field Consultant network. For example, in 2014 our UK operations delivered over 2,000 days of technical training and multiple online and practical in-field training. There are four levels of training:

- **Level 1 - On joining**
  - Induction to the company
  - Understand the job
  - Comply with legal/industry requirements
  - Technical sign off
  - Externally-endorsed qualifications

- **Level 2 - Within 6 months of joining**
  - Industry-recognised qualification or externally endorsed by a respected industry awarding body
  - Practical assessment or examination

- **Level 3 - On sponsorship by manager**
  - Good quality assurance and technical performance assessment scores
  - Industry-recognised qualification or externally endorsed by a respected industry awarding body
  - Practical assessment or examination

- **Level 4 - High level industry expert**
  - Industry-recognised qualification or externally endorsed by a respected industry awarding body
  - Practical assessment or examination
Increasing demand for pest control

Across the globe, pest control management is set to become increasingly important with rising economic activity, as well as urbanisation, increasing population and changing demographics. In addition, with pests being more of a burden in warmer climates, the impact of climate change is potentially an important factor in the future of pest management.

1. Economic activity

Increased economic activity increases demand for pest control. For example:

**Offices:** One of the largest customer types. In improving economic conditions, more offices are built and occupancy levels increase. Often they have food preparation areas requiring food safety certification. Sightings of rodents have negative effects on colleague motivation, not to mention their health and well-being.

**Hospitality:** Places where people eat and drink require hygiene and food safety licences. Professional pest management therefore provides a ‘licence to operate’. The number of restaurants in the USA has remained steady in recent years - 635,494 in 2014.* According to the British Hospitality Association, there are c. 45,000 hotels in the UK and this has increased in recent years, due to the expansion of the budget hotel chains. Today, hotels take proactive management for bed bugs very seriously with monitors and staff training in place. Between 2011 and 2012 there was a 90% increase in bedbug call outs in the UK. This has been explained by increased travel and previous low awareness amongst hotel employees and owners.

**Housing:** Growth in the housing market in many parts of the world, particularly North America and Australia, sees increasing demand for termite control services. Termites cause more damage than fire or floods in North America and Australia.

2. Increasing global middle class

The new global middle class is driving demand for global pest control with less tolerance of pests and more focus on increasing hygiene standards and family health.

The United Nations describes it as an historic shift not seen for 150 years. The Brookings Institution estimates that there are 1.8 billion people in the middle class, which will grow to 3.2 billion by the end of the decade. By 2020, the middle class in Europe and North America will be less than a third of the world’s total, down from more than half just three years ago.

By 2030 Asia will be the home of 3 billion middle class people. It will be 10 times more than North America and five times more than Europe. The middle class in Latin America is expected to grow from 181 million to 313 million by 2030, led by Brazil. While in Africa and the Middle East it is projected to more than double, from 137 million to 341 million.

Rentokil’s M&A focus continues to be in these growth and emerging markets.

*Source: Statista.com*
3. Urbanisation

According to the United Nations (UN), 54% of the world’s population lives in urban areas, a proportion that is expected to increase to 66% by 2050 (with the urban population expected to rise to 62% in Africa and to 65% in Asia, and to 90% in Latin America). Latin America is currently the most urbanised continent in the world, with 80% of the population living in cities.

UN projections also show that urbanisation combined with the overall growth of the world’s population could add another 2.5 billion people to urban populations by 2050. There will be numerous challenges in meeting the needs of these growing urban populations, including rising housing demand and an increasing focus on public health.

Urbanisation drives demand for pest control as residential, business and public sector customers demand higher standards of hygiene in the face of increasing pressure on space and resources. Increased proximity of buildings raises the potential for a pest problem to be shared.

4. Demographic change and population increase

In ten years’ time, when Rentokil celebrates its 100th birthday, UN predictions put the world population at 8 billion (the global population was 3 billion in 1960). At the same time, demographic changes have seen the number of people aged over 60 grow significantly.

In the year 2000, the number of people aged 60 years or older in the world was 605 million. This number is projected to grow to nearly 2 billion by 2050. Changes in age distribution have complex social, business and public health implications.

The challenge for countries and communities will be to meet rising demand for the Healthcare industry and Residential housing for this larger and older population. These are large and growing customer segments for the pest control industry which will play an active role in maintaining standards of public health. Equally, rising demand for food will place greater need for food processing plants, a major commercial sector for pest control.

5. Legislation and regulation changes

Across the globe regulation and legislation requirements are increasing as governments try to address the need to improve potential impacts of chemicals on public health and the environment. Rentokil is leading the development of new proprietary products to meet these needs.

Europe is at the centre of most of this change currently and examples of this, within the pest control market, include the recent introduction of the REACH and Biocidal Products Regulation. These regulations are designed to ensure that products can be used safely, whilst minimising the risk of exposure to humans, food, wildlife and the environment.

Food standard requirements, driven by global organisations such as AIB International, BRC Global Standards and large food processing and retail organisations, continue to improve with best practices being embraced to improve safety within the food chain. Pest control is increasingly an essential element of these standards to help customers protect brands and their reputation. Rentokil has an in-house regulatory team to monitor the changing regulatory landscape and ensure that we are prepared for this changing environment.
6. Climate change

There is no doubt that pests are more of a burden in warmer climates. Therefore the impact of climate change is an important factor in the future of pest management. As a global organisation, Rentokil is already seeing the impact of warmer temperatures.

Milder winters and more volatility in temperatures and precipitation have the potential to change the pest mix and demand for pest control over the long-term. For instance, we are already seeing increased survival rates of mosquitoes and other insects in southern Europe, and rising concerns about vector-borne diseases in the region. Termites may continue to move further north through Europe (although to date the UK only has one known infestation of subterranean termites).

One of the best examples in our pest control remit for climate-change induced spread is the Asian Tiger Mosquito. The native range of this mosquito is throughout the tropics of Southeast Asia, the Pacific and Indian Ocean Islands, north through China and Japan and west to Madagascar. However, Tiger Mosquitoes have been one of the fastest spreading animal species over the past two decades (Benedict et al. 2007). To date, it has spread to at least 28 countries outside its native range around the globe (Benedict et al. 2008). This is the mosquito that brought Chikungunya disease to Italy in 2007.

As with mosquitos, flies thrive in warmer climates. According to the World Health Organisation publication, ‘Public Health Significance of Urban Pests’, climate change may have a significant impact on fly populations.

According to a statement by the World Health Organisation, using recently predicted values for warmer temperatures, Goulson and colleagues predicted a potential increase in fly populations of 244% by 2080, compared with current levels. If this were to occur, concomitant increases in fly-borne diseases would be expected.

“As a global organisation, Rentokil is already seeing the impact of warmer temperatures.”
Key Industry Trends

Over the next five years, Rentokil anticipates a number of developments in the international pest control market.

1. **Growth in the emerging markets**

Regions such as Latin and Central America, Asia, Africa and the Middle East will see increasing demand for pest control services as new food safety and hygiene legislation comes into force, as well as reducing public tolerance of pests amongst the growing middle classes. We are already seeing increased awareness following outbreaks of diseases such as bird flu, swine flu and SARS. Government action and legislation requires the professional management of pests and other insects that could affect public health and the local economies.

2. **Market consolidation in mature markets**

The industry is highly fragmented with many small operators. We expect to see continued M&A activity to consolidate market positions, build density, enter new markets and build sector expertise. Joint ventures will also open up opportunities in some markets where local ownership rules apply or to deliver access to global technical knowledge.

3. **Introduction of new biocides**

These are increasingly being used to replace traditional pesticides as they are more environmentally responsible. For instance, Rentokil is the only company to have registered CO₂ for use in the control of rodents under EU biocidal regulations. This required three years of work by a team of scientists, legal and regulatory professionals to achieve approval in the EU, and then the USA. The company is continuing to work in the areas of insect and rodent control.

4. **Pace of innovation**

An increasing area of focus is on prevention, remote monitoring and added value information management for reporting of pest activity. This will become more important in the more mature markets (Pacific, Europe and North America) and high dependency customer groups. Innovative new products and solutions will be introduced by pest controllers to support more environmentally-responsible solutions.

5. **Smarter use of technology**

Globally, the pest control industry is developing new technological solutions to improve service efficiency. Areas include: route optimisation, online sales; use of smartphone apps to identify pests; mobile communication technologies to bring real-time technical support to the field; and smarter extranets to offer greater management information for customers.
North America

Market Overview
North America represents over 50% of the global pest control services market

Termite control work generated approx. $1.41bn in revenue in 2014

Worth an estimated $7.5bn in 2014 (£5bn)

Residential Pests
- Bed bug business rose nearly 6% in 2014
- Ants and cockroaches account for 41% of service revenue
- Control of rodents account for 11% of service revenue

Market Trends
- Strengthening of the housing market and a steadily improving economy appeared to aid the termite and commercial market segments of the professional pest control industry in 2014.
- The demand for ant control and bed bug services is still growing, continuing a trend that started 7 years ago. Heat treatment now accounts for 11% of bed bug treatments.
- Over the last 9 years there has been a large growth in the number of pest control operators offering mosquito control services, reflecting increased concern over the health risks associated with the spread of viruses and diseases through these insects.

Competitive Landscape
- There are estimated to be almost 20,000 pest control companies in North America, and the average number of technicians in each company is 5.5.
- The big four U.S. service providers are Orkin, Terminix, Ecolab and Rentokil. These represented nearly 45% of the total revenue for the termite and residential general pest control market segments in 2014.

Did you know?
According to the University of Florida, a new ‘super termite’ may soon be found in the United States following interbreeding amongst the Asian and Formoson subterranean termites, whose life cycles now overlap due to changes in the climate.

Source: Specialty Products Consultants, LLC – A Strategic Analysis of the U.S. Structural Pest Control Industry 2014
UK & Ireland

Market Overview

Valued at £400m
Grown at 3% per annum despite the economic recession

Food and pharmaceutical industries make up 6% of the market

Hospitality
20% of the market

20% of the market is Residential - a sector fast growing as public sector solutions are reduced

In summer, wasps account for 25% of the market

Birds remain a small but growing 1% of the market as the awareness of birds as pests and new treatment solutions become available

60% of the market remains rodent based

Did you know?
Rentokil celebrates its 90th anniversary in 2015. Our longest-serving customer is a school in England which we have protected from pests for 80 years. We have several customers including businesses and residential homes across the UK which we are proud to have served for over 70 years.

Market Trends

- Key drivers of growth are increasing hygiene standards and awareness, and to some degree legislation and the reduction of public sector in-house service provision – which overcame the general trend of declining volume of SME customers through the recession.

- The growth of major customer groups has led to growing expectations of higher and more consistent levels of customer service and greater availability of management information. These have both historically been a challenge for some suppliers to meet, over a national footprint.

Competitive Landscape

- Rentokil is the market leader and the most recognisable and trusted brand.

- 100+ medium to large size pest control companies.

- Vast majority of the market is made up of small, local businesses – a highly fragmented market.
Continental Europe

Market Overview

Highly fragmented market with over 6,000 pest control companies

Worth an estimated €1900m (£1.4bn) in 2014

Germany, France and Benelux are the largest markets

Pests

Germany: Increased international travel has fuelled the growth of pests such as bed bugs, while climate changes have fuelled the occurrence of new species such as the Oak Processionary Moth which can cause serious health issues.

France: Rodents account for the majority of revenues for Rentokil in France. It is estimated that in Paris, the rat population is between 6 - 8m versus the human population of 2.2m.

Benelux: Main pest problems are rats and mice, not only their eradication but also their prevention which is crucial given the national large food processing industry.

Spain: Major pests are cockroaches, rodents and bed bugs. The bed bug trend changed in 2014 with more problems in homes than in hotels which are now well protected. The Red Palm Weevil is an emerging pest (originally from Asia, it has spread to Africa and now Europe).

Market Trends

- New EU regulation to restrict the external use of rodenticides for rats, and only by professionals following a risk analysis, is being implemented country by country - increasing the potential effect of more rodent problems. See page 22 for details of RodentGate.

Competitive Landscape

- Highly competitive and fragmented market, focused on the 400+ cities with more than 100,000 population and other large conurbations across Europe.

- The big four German service providers represent just 20% of the total pest control market. There are estimated to be over 1,300 pest control companies in Germany.

Did you know?

A new industry standard is being set to create a unique benchmark for pest controllers. The initiative, which is accompanied by a certification scheme, is designed to promote professional standards for pest control companies across Europe. The new scheme is built around EN16636, a new European standard which was developed by the industry, including Rentokil, in collaboration with experts from Europe’s national standards institutes and CEN, the European Standards Bureau.
Asia

Market Overview

Main sectors are food processing, food retail chains, industrial & manufacturing, hotel & resort, offices and residential.

Key drivers of growth are the growing middle class and stringent government regulation on hygiene and sanitisation.

Public sector campaigns, which aim to control mosquitoes in the spread of dengue fever, are major government public health initiatives.

For example, there have been over 2,400 reported cases of dengue fever in Singapore this year. The National Environment Agency employs 850 officers to carry out dengue inspections, auditing and enforcement on a full time basis.

Market Trends

- Strict new regulations on food safety, health and the environment have been initiated by governments across the region.

- With increasing pest risks within the Asian supply chain, large food-related businesses are sharing the responsibility for pest control with their suppliers and requiring management information to support certification needs.

- The use of extranets to provide pest control monitoring and performance tracking for customers is vital to high dependency customers in particular. Mobile technologies are also being used by pest control companies to enhance service productivity.

- Increasing customer demand for eco-friendly services and products.

- In India, in line with the government’s ‘Clean up’ campaign, demand for higher hygiene standards continue to rise in workplaces and public areas.

Pests

The climate in tropical South East Asia is conducive to pest activity all year round.

Pest activity generally becomes significant in the spring and summer months in North Asia.

While termites and mosquitoes are significant threats, other pests such as ants, cockroaches, rodents and flying insects are all major pests in Asia.

Did you know?

By 2050, protein consumption in Asia will have more than doubled. Due to the increasing population, the region needs more safe food for people, free from pest and hygiene risks. Food companies and governments are responding to this increase in demand in various ways, for instance ‘active engagement and control of critical issues’ and ‘securing of supply chain through technology’ - which means a large and long term opportunity for the pest control and hygiene sectors in the region.

*Source: PWC*
Market Overview

Border protection is a high priority and this includes pests and pest-bourne diseases. The region has stringent regulations to prevent the importation and spread of pests.

Worth an estimated £450m

In Australia there are 2,700 pest control companies and over 10,000 registered pest control technicians.

Source: Australia Environmental Pest Managers Association

Market Trends

- Australia and New Zealand are recognised as major food producers for the growing Asian population. Free trade agreements with China and India will grow export demands positively, impacting both the pest and fumigation industry. With the ever increasing profile of food safety, food processing companies are required to comply with 3rd party audit requirements eg. AIB and BRC. Many smaller pest control companies cannot meet the stringent requirements of these compliances.

- Growing population and urbanisation: Australia’s population is 24 million and is estimated to grow by 150% by 2060. Key states are on the eastern seaboard where 75% of the population resides. Treatments for termites and general pests, pre- and post-construction will benefit from that increase.

- A significant increase in construction is underway and likely to be sustained.

- There are over 3,000 pest companies in the Pacific region; this is a fragmented and competitive market.

Pests

- The Australian climate means pests are active all year round. Main pests are: termites (c. 40%), crawling insects (c. 40%) and rodents (c. 20%).

- There are stringent new building regulations for subterranean termite management during construction. Also, West Indian Drywood termites are of increasing concern to the Australian Quarantine and Inspection Service (AQIS) and Department of Agriculture.

Did you know?

Mice plagues occur regularly in country regions where vast numbers of mice can be seen running through the country and finding themselves in farms, factories, shops and homes. Rentokil has customer sites with, at times, over 500 rodent stations where we replenish each station, each day, with up to 10 bait blocks which are then consumed in one night.
Other Growth Regions:

Market Overview

- South America (including Brazil, Chile, Colombia, Argentina and Peru) has a population of 400m and high urban density (87% Brazil, 89% Chile).

- The pest control market is estimated to be worth $750m per annum, this rises to $900m if you include Central America. These figures do not include public sector vector control - the Brazilian government alone spends $1.2bn per annum on dengue control.

- Growing middle classes are demanding higher standards of hygiene and this has been reflected in increasing demand for pest control.

Market Trends

- Major customer sectors include retail, agriculture, mining and industrial.

- In South Africa, mining contributes substantially to the country’s economic growth and requires pest control to support essential health and safety maintenance.

- In the Caribbean, the hospitality sector, which is a major sector for rodent and insect prevention, saw heightened demand in 2014 with visitors up 5.3%. The Caribbean Tourist Organisation expects visitor numbers to rise by around 4% in 2015.

- In Dubai, eight out of ten pest control complaints are about bed bugs and cockroaches, according to an online survey through Facebook. The remaining pest complaints were for ants (10%) and spiders, snakes and lizards (which made up the final 10%).

Competitive Landscape

- Fragmented markets with a combination of multi-national companies (often using franchises) and small city-based businesses.

- Rentokil is a leading and established brand in both Africa and the Caribbean, having entered the markets over 40 years ago.

Pests

- The hot and tropical climates make ideal breeding conditions for many types of pest including rodents, flies, bed bugs, mosquitoes, termites, ants and spiders.

According to the Instituto Butantan, Brazil has **370 known species of snakes**, 55 are venomous, and there are 160 species of scorpions.

Cockroaches, carriers of diseases such as **salmonella and gastroenteritis**, are high-risk pests in homes.

Did you know?

Major sporting events such as the Olympic Games provide large boosts to the local economy with major building projects (stadiums, hotels, airports etc.). Demand for international standards of hygiene and pest control also rise and standards are then maintained, as we saw following the 2014 World Cup in Brazil.
It looks like an ordinary dolls house standing at the edge of a children’s bedroom but the little grey faces of mice peeking out through the windows and the tails pushing through the crevices between the roof and the walls tell a different story. The colourful wooden dolls house is just one of the features of a penned area specially created at Rentokil’s Global Technical Centre to monitor the behaviour of mice.

“Understanding their behaviour helps us to do a better job for customers,” says Stewart Power, Marketing & Innovation Director. “It emphasises the need for a three-dimensional approach to pest control. The mice do not stay on one level or indeed at one location, but instead scatter across to explore every corner and crevice in the pen. Activity levels are heightened, the darker the environment.”

Behavioural insights are already emerging. The mice have not reached the surface of a kitchen cabinet, because their claws are unable to gain purchase on certain types of smooth materials. By contrast, the top shelves of a wooden bookcase are littered with droppings – evidence that mice have been exploring. Some have climbed the unit by wrapping their legs around an electrical wire flex that dangles through a hole between shelves. Others have managed to grip their claws on the wood’s chinks and cracks. “They’ve edged up resting their back against the wall to help them,” Power adds. Others have easily mastered a racking frame. On one shelf, a lone mouse sits at the edge of the hole, prompting would-be intruders to peek through and scurry away. It may be a one-off event, or an indication as to how mice mark and protect their territories.

The challenge for Rentokil is to take these insights and use them to produce new solutions and better trained technicians.

CCTV cameras monitor the mice at all times. Other than providing the best food and water, the scientists do not interfere with the mice’s living environment. By studying their actions and behaviour, they can create methods to prevent or deter mice from accessing properties. It is about ensuring the mice or rats do not enter certain spaces.

A baby mouse can squeeze through a gap just six millimetres across, roughly the width of a pencil, which highlights the challenges in making properties totally invasion-proof. It may instead be more practical to slow down methods of access dramatically or to identify ways to prevent mice exploring beyond the environs in which they first entered.
The solution here may lie with boards, resembling draught excluders, fitted along the base of doors. Most doors have gaps between their base and floorboards, and plugging these may help slow infestations.

A wall fitted with a plastic strip fitted with dense bristles along its base divides another pen. There are no obvious points of entry here. The key instead is to watch how long the mice take before they break through the excluder into the space on the other side. In the event, it took several days for the mice to gnaw through the plastic bristles of a draught excluder. As a result, new rodent proofing products are on the way as well as technical training on the most effective places to install them.

Scientists are also observing how mice and rats interact with bait boxes. Where once mice and rats would happily have explored bait boxes, evidence has emerged that in some areas their behaviour has changed and they will actually avoid the traps and move around them. This was first witnessed in rats located in the Midlands, following the demolition of a shopping centre, which displaced thousands of rodents. The scientists are studying whether larger or smaller holes make a difference to this behaviour, where the hole should be positioned on bait boxes and what aromas may lure rats and mice in.

Rentokil’s scientists also investigate new rodent traps and bait types. RodentGate is the most recent invention to launch - initially in Germany - to great success. The unit features a ‘gate’ which keeps the bait safe and fresh until the mechanism is activated by rodent movements (breaking infra-red beams). The gate then opens allowing access to the bait. Slugs and other creatures are stopped from accessing the bait meaning that the unit is highly effective but also delivers technician productivity savings and accurate use of the baits within the controlled boundaries.

At a time when the EU is legislating against the use of traditional rodenticides in open areas, RodentGate, now patented, has impressed regulators and experts in the industry. Just one example of where Rentokil can use its scientific backbone to provide competitive advantage.

The Global Technical Centre, which covers the full range of pests, not only monitors behaviour and creates units for today, but is always on the lookout for what might make a breakthrough in years to come. Currently under trial is a range of repellents which might not quite match up to the Pied Piper, but we’re getting close.

Rentokil: Reinvented.
The process of transforming Rentokil Initial into one of the largest users of Google technologies (social media, video calls and apps) began more than three years ago with the widespread adoption of Google’s suite of online tools and the launch of the internally code-named Project Speed.

Some activities, such as driving long distances to team meetings, do not add value, but are necessary. Speed is about doing more that adds value and doing less of what doesn’t.

One of the most visible ways in which Speed has changed working practices has been through Speed Mapper, an in-house produced App. Prior to its introduction, technicians in UK Pest Control would often plot their working week using filing systems that contained details of their customers, their service level agreements and their immediate requirements, and a series of physical maps to find their way around the country.

But if they were called out to an emergency, there was no way to check if there were other customers in the vicinity thus ensuring that the rest of the day was not wasted.

Rentokil has service level agreements with key customers, such as leading supermarkets, restaurants and retailers, specifying terms such as the number of visits per month and the time between an emergency call out and a return visit.

Speed Mapper brings up a Google Map of the neighbourhood, with coloured icons marking the location of every customer and their current status, demonstrated by the numbers 0, 1 and 2, highlighting those that need to be visited that week. It allows technicians to check the locations of key customers and the terms of their service level agreements. They can plan their days more efficiently, by focusing their attention on certain postcodes, for example, or by checking out the locations of other key customers after an emergency call-out or follow up visits that could be made on the return journey.

Speed Mapper also provides an up-to-date traffic map, indicating the expected time it will take to travel to each customer. “Speed Mapper has reduced drive time and improved efficiency and colleague engagement, because they don’t want to spend their time in vans,” says Phill Wood, MD of the UK & ROW Region.

Restructuring operations around a single country team with shared property led to the closure of over 40 branches. Employees are often based at home, hot-desking or out on the road. Virtual communities are used to share knowledge and best practice.

Sales leads are posted on Google+ community boards along with the actions pursued. Managers can post out daily updates, highlighting star performers and providing relevant information. It is also a far more transparent process.

Technicians now post pictures of issues they face, either to seek advice or to gain further information. In the past, they may have had to return to the office or ring the technical desk to ask for help in identifying, for example, a spider found in a supermarket. It could be time consuming as descriptions were read over the phone and databases consulted. Today, they can post the picture or stream images and receive responses almost in real time. Lessons can be shared immediately.

Google Hangouts have also transformed the way colleagues interact. They have reduced the need for physical meetings of colleagues located across the country, saving time, money and energy. “We can hold virtual training sessions with colleagues in South Africa or Kenya, say, without needing to fly them to a central location,” said Wood.
But they have also been used in other ways. Technicians now have onsite consultations via Hangouts with their line managers, seeking advice on difficult issues that they are facing. By sharing images and videos from their job, the technician can tap into their manager’s years of experience. It is like having a virtual manager by their side.

Similarly, Speed Reporter has transformed the use of documents and paperwork within Rentokil. It allows colleagues to access Google Documents remotely and to collaboratively edit if required. For example, draft service agreements can be uploaded, and related Sales and Service colleagues can introduce edits or offer suggested amendments.

Working collaboratively also reduces the number of reports that need to be produced. For example, a major customer may have hundreds of sites that need to be visited regularly and require monthly reports on actions and advice. Centralising the function eliminates the need for duplication and means that the number of reports to one customer can be cut back.

Rentokil offers a £50 ‘find an app’ scheme that offers a cash incentive to colleagues to share apps that they have found useful in their day-to-day work. To date, 18 apps have been shared, including a document scanner, WhatsApp and Evernote, that organises all notes and documents, and Skitch, that allows users to mark up documents and then share them.

Rentokil: reinvented.
Reinventing Rentokil: Innovation at work

• **Online reporting and auditing:**

  MyRentokil is Rentokil’s unique online reporting and analysis system. It is easy to use and delivers real-time management information, facilitating a proactive approach to pest prevention and control. It provides 24/7 information access - as an online tool, you can gain access from wherever you are on a range of devices - from desktop to mobile. All details of pest activity and pest prevention recommendations are available - at the tip of your fingers.

• **Chemical-free Enthotherm heat treatment:**

  At Rentokil, we offer an innovative range of solutions to get rid of bed bugs and to help prevent re-infestations. This suite of treatment solutions includes an award-winning professional ‘chemical-free’ Enthotherm heat treatment to quickly and safely eliminate infestations. The heat treatment kills all lifecycle stages of pest insects - eliminating eggs, larvae and adult insects in one treatment. The process works by heating liquid syrup and delivering it through insulated pipes to heat exchangers placed strategically within the treatment area. Heat probes and thermal imaging technology is used to ensure extermination of all target insects.

• **Smarter sensing:**

  Rentokil PestConnect, the world’s first and most comprehensive smart sensing system for pests, is now live in Belgium and the Netherlands with more than 300 customer sites.

“Work to reinvent Rentokil happens every day. We are constantly moving forward.”

Andy Ransom
CEO of Rentokil Initial plc
“Rentokil is the world’s leading pest control company. I believe this because it has an unrivalled global leadership position and the strongest brand in the business. It has a proven, repeated business model and gives its people the best training and tools to get the job done. Its pipeline of innovation is second to none and it is well positioned in key growth markets. It is highly cash generative and delivers strong returns on capital. This is a great business in a compelling industry and with good opportunities for growth over the short, medium and long term.”

Andy Ransom
CEO of Rentokil Initial plc