

## LESSONS IN DRIVING BUSINESS SUSTAINABILITY

### OUT WITH THE OLD, IN WITH THE NEW

**The Royal Mint has found a way to finance the production of new coins by recycling old ones.**

#### THE BUSINESS

The Royal Mint produces all the circulating coins in the UK. It is also the world's leading export mint. Every year, it makes around four billion circulating coins and 'blanks', metal discs not yet pressed as coins. It also designs and manufactures commemorative coins for the UK and overseas customers. It produces armed forces and civilian medals for the UK and many overseas governments. The Royal Mint has an annual turnover of more than £300m and employs over 800 people at its site in Llantrisant, South Wales.



Coins are melted down for recycling

#### THE IDEA

In 2013, The Royal Mint launched an alloy recovery programme on behalf of Her Majesty's Treasury. By 2017, around 3.8bn 5p and 1.6bn 10p cupro-nickel alloy coins will have been withdrawn from circulation and replaced with new nickel-plated steel aRMour coins. The Royal Mint aRMour is a superior plating process, which is suitable for coins and coin blanks and offers a variety of benefits compared to other products currently on the market.

The copper and nickel in the old coins is being recycled and either used for new coins or sold to third parties. 'We return the metal value to HM Treasury, after deducting costs incurred and a processing fee,' explains Vin Wijeratne, The Royal Mint's Director of Finance.

#### THE INNOVATION

The alloy recovery project could usher in a sustainable way of producing new coinage, not only in Britain but in many other countries. This modernisation of physical currency will also be supported further by the upcoming introduction of The Royal Mint's new high security feature which, Wijeratne says, gives coins a 'banknote level of security'.

The project gives national banks and other currency issuers an incentive to switch from old to new coins by funding the otherwise costly change from the metal value realised from the old coins. This helps to maintain the supply of new coinage when metal prices are high. Usually, high prices delay recoinage decisions. Coin production is capital intensive. So it is essential for the sustainability of The Royal Mint to maintain a steady flow of production through its operationally-gearred processes. The alloy recovery project does just that.

**‘ The alloy recovery programme and the ‘banknote level’ security innovation have generated a business model and intellectual property that will boost long-term profitability and resilience. ’**

Besides that, the new banknote level security system means it could be possible, in the future, to produce higher value coins with less risk of forgery. An aRMour coin generates 15 times less carbon dioxide than a banknote over their respective lifetimes, so the environment would win, too.

If this alloy recovery approach were replicated more widely for all coins in the long term, it would help The Royal Mint to win market share, deliver increased value to customers, and protect its own future.

## FINANCE FUNCTION LEADERSHIP

The finance and supply chain department has been a key driver of the alloy recovery programme – including the security feature. The finance team worked with sales and operations to model the best structure for the programme. The model was used to win board approval and provide analysis for key stakeholders.

The financial performance of the programme is forecast, tracked and reported frequently as part of the Royal Mint's standard reporting practices. It also features prominently in standard monthly management information. The Royal Mint finance professionals and HM Treasury experts have monitored prices in metal markets to assess, monitor and mitigate price risk. The finance team helped develop the business case for new capital equipment – a coin crusher – to process the large numbers of old coins.

The finance and supply chain staff worked closely with planning and operations to identify the optimal use of returned coins. 'This is a complex process which depends on variables including customer demand for cupro-nickel coins and current metal market conditions,' explains Wijeratne. 'These decisions have a big impact on profitability and working capital so they need to be communicated, managed and factored into our performance measurement.'

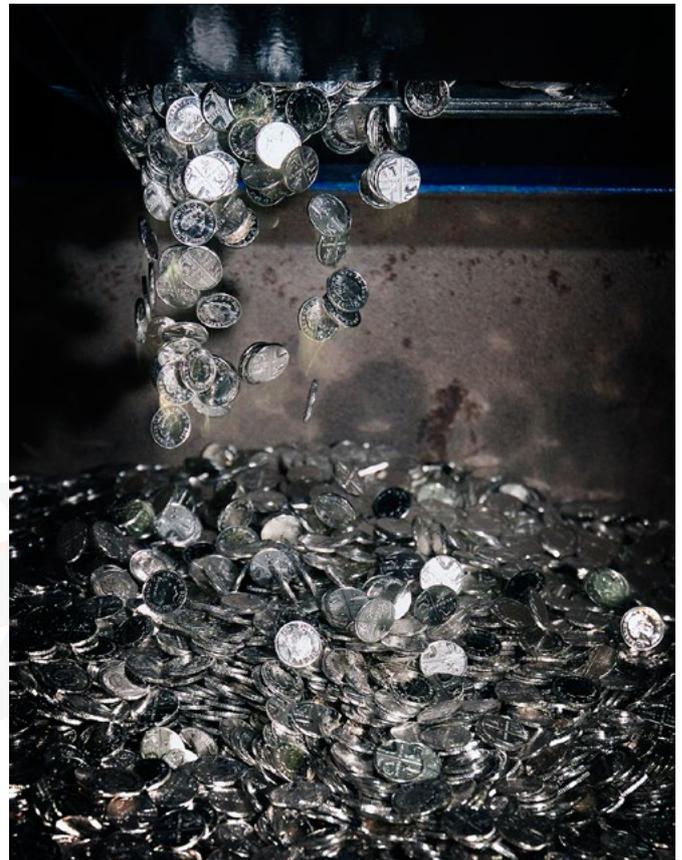
In addition, the finance and supply chain team established and validated the financial, social and environmental credentials of new partners for sorting recovered coins and of customers for destroyed coins.

**“ We were able to show we could do the right thing for the environment, the taxpayer and the sustainability of our own business. ”**

## POSITIVE LONG-TERM IMPACT

The alloy recovery programme is delivering a string of long-term environmental, social and economic benefits.

On the environmental front, old cupro-nickel coins are being completely recycled into new coins or used in other applications. The crushed old coins are an ideal 'feed stock' for melting because of their purity and small particle size. 'This significantly reduces energy consumption compared to melting virgin ingots,' explains Wijeratne. New aRMour coins are totally recyclable at the end of their life and are used in the stainless steel industry. This minimises energy consumption and reduces landfill volumes. If all 5p and 10p coins are converted from cupro-nickel to aRMour it will reduce the CO<sub>2</sub> content of coinage by almost 200,000 tonnes of CO<sub>2</sub> – equivalent to the annual energy produced by 50 wind turbines.



10p coins coming from the press

The programme and the 'banknote level' security innovation have generated a business model and intellectual property that will boost long-term profitability and resilience, argues Wijeratne. 'This will help protect a national institution, continue 1,100 years of history, and ensure that we continue to be a significant employer even in the future.'

There are economic benefits, too. 'We have already returned £25m of value to HM Treasury through the programme,' says Wijeratne. 'In total, the programme could return over £50m.' So far, the programme has produced 1.2bn new coins and been worth around £10m in profits to The Royal Mint, delivering dividends for its main stakeholder and the general public as a result.

## LESSONS FROM THE CASE STUDY

When a large project involves a lot of potential stakeholders it is important to think about the strategy of pitching the idea. 'One of the challenges is to pitch the right idea in the right way to the right people,' says Wijeratne. In the case of the alloy recovery project, that meant working pro-actively with key partners at HM Treasury, and providing them with a fully-rounded view of the benefits.

With a large project, it is important to assemble a team that is able to give it the dedicated focus it requires. That includes ensuring there is good project governance and that those who should be, are involved in decision-making. It is also important to map the impact of a large project across the organisation.

Finally, the kind of analytical mindset that the best finance functions possess can take an idea like sustainability and demonstrate in meaningful terms to a range of stakeholders how all can benefit from a project. 'We were able to show we could do the right thing for the environment, the taxpayer and the sustainability of our own business,' adds Wijeratne.