

THE BUSINESS CASE FOR PACKAGING SUSTAINABILITY

Bristol-Myers Squibb Australia

Redesigning packaging to improve supply chain efficiencies



Australian Packaging Covenant

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Summary

Bristol-Myers Squibb (BMS) is a biopharmaceutical company with a longstanding commitment to reduce the environmental impacts of its products and packaging. This case study describes two packaging innovations developed by the Australian business in partnership with its third party logistics supplier, DHL: a reusable distribution pack for cold chain products and more efficient packaging for medical samples. The benefits include reduced waste, packaging cost savings, greater product security and enhanced customer service.

"Bristol-Myers Squibb takes its commitment to environmental sustainability seriously and extends this expectation to our partners and suppliers. We are proud of the packaging innovation developed in partnership with DHL. These initiatives ensure the integrity of our medicines while reducing packaging and delivering cost efficiencies to the business."

Anthony Mancini, Managing Director, Bristol-Myers Squibb Australia and New Zealand

Lessons from this case study

- Packaging and logistics partners are often willing to work with customers to develop innovative packaging solutions, particularly where there are wider industry applications. An effective supply chain partnership must recognise the business needs and imperatives of all parties.
- Reusable distribution packaging can achieve significant environmental and business benefits. However, the return system must be convenient for consumers and cost-effective for the supplier.
- Projects with an environmental purpose often uncover additional business opportunities or benefits. BMS redesigned their distribution packaging for medical samples and in the process found a way to improve product security.
- Many consumers are unwilling to accept 'over-packaging', which can be seen as wasteful and inconvenient to manage at end of life. Sustainable packaging initiatives have the potential to build customer loyalty and preference.



The Business Case for Packaging Sustainability

About the company

Bristol-Myers Squibb Australia (BMS Australia) is an affiliate of the Bristol-Myers Squibb Company, a global biopharmaceutical company based in the US. One of the company's global sustainability goals for 2015 is to 'enhance the environmental and safe handling aspects of our medicines throughout their life cycle'. To achieve this goal, BMS has committed to integrate sustainable design principles throughout product development and commercialisation, and reduce packaging waste by 5% from a 2009 baseline.

BMS Australia employs around 200 people in research and development, market access, sales and marketing and corporate support functions. In 2013, BMS Australia's turnover was \$191 million. Products are imported from BMS and third party manufacturing sites in the European Union and the US. BMS Australia controls tertiary packaging for distribution to pharmacies, doctors' surgeries and hospitals within Australia.

Reusable cold chain packaging

Genesis of the project

In 2009 BMS Australia started using a BMS shipper for medical and pharmaceutical products that must be transported under temperature controlled conditions. These shippers were single use cool boxes. In 2011, BMS Australia identified a supplier to manufacture the boxes locally with a view to changing specifications to allow re-use (also referred to as "reverse logistics"). There were two main drivers for this initiative:

1. The BMS shipper was expensive to bring into the country – as the boxes couldn't be flat-packed, the company was paying to transport air
2. Major customers were concerned about the number of boxes they had to manage and dispose of.

In parallel, BMS Australia began working with its third party logistics supplier, DHL, to develop a reusable version.

The approach

BMS Australia works in close partnership with DHL, discussing evolving logistics requirements at monthly meetings. At quarterly meetings, they look for continuous improvement and brainstorm innovation to address future needs.

To be successful, this project had to meet the business needs and priorities of both companies. Key factors for BMS included:

- Product integrity – this is critically important for customers (health care providers) and the patients who are prescribed the medicines. If a product spends time outside the mandated temperature range, its effectiveness is potentially compromised
- Validated quality assurance – maintaining functionality and appearance
- Cost effectiveness – the cost of leasing rather than buying
- Sustainability – reduced packaging waste and positive impact on customers.



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The BMS Australia re-usable cool box was implemented through DHL's infrastructure in 2011. DHL had already started working on an improved solution to produce a 'Cool Green Cell' to meet the needs of BMS Australia and other customers in the health services sector. The packaging is made of high quality polyurethane and has been specifically designed for the delivery of pharmaceutical and medical products that need to be stored between +2°C and +8 °C.

The Cool Green Cell is leased from DHL which manages all aspects of the infrastructure for sourcing, delivery of products to the end customer, collection of empty boxes, refurbishment and quality assurance. The new pack was implemented in 2013 and BMS Australia began the transition from reusable cool boxes to the Cool Green Cell.

Figure 1: Delivery of a product in the Cool Green Cell



Challenges

One of the key challenges was the need to change the expectations and behaviour of customers. Initially, the return relied on the hospital or pharmacy receiving the packaging to call DHL and arrange for it to be picked up. Return rates were disappointing, so the system was re-engineered to make it more convenient for customers.

Return rates soared to 90% when the new system was put in place:

- DHL Supply Chain established a team to arrange returns, which made it easier for customers
- A daily report is run identifying all customers who received a re-usable cool box the previous day
- DHL Supply Chain contacts the hospital or pharmacy to confirm a collection date and time and provide specific instructions. DHL books collection of the re-usable cool box with a transport carrier
- Alternatively, some customers prefer the DHL driver to wait for the product to be unpacked and then take the cool box away.



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Figure 2: An infographic showing the structure of the Cool Green Cell



Business benefits

The environmental savings include a reduction in waste and materials consumed to make the packaging. These savings will increase as more customers adopt the Cool Green Cell. There were also other business benefits (**Table 1**).

Table 1: Benefits of the reusable cool box

Environmental benefits	<p>In 2012 the reusable cool box achieved annualised savings in packaging materials of more than 87 tonnes and 565 m³.</p> <p>In 2013, with the transition to the Cool Green Cell, BMS avoids the disposal of 108 tonnes and 900 m³ of packaging material.</p>
Cost effectiveness to BMS Australia	<p>BMS avoids the purchase of more than 15,000 cool boxes and related ice/gel packs.</p> <p>Leasing the reusable boxes is more cost effective because the costs are amortised over a greater number of users. Over time this cost is expected to come down as more companies take up the solution.</p> <p>The reusable box provides at least the same level of product protection.</p>
Cost saving to customers	<p>Customers save the cost of disposing of single-use boxes (over 100 tonnes in 2013) and the time they would normally spend on waste management. This represents a significant value-add for BMS customers.</p>
Benefits to DHL	<p>The Cool Green Cell is an Australian innovation that has wider application. It will be launched in the Asia Pacific region in due course.</p>



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Packaging medical samples

Unlike biological products that require cold chain supply and are administered by infusion, other BMS medicines come in the form of tablets. To assist doctors to find the treatment that works best for their patient, BMS provides sample packs (typically 5 days of medication). Sample packs are provided to doctors' surgeries in small quantities and restocked as required.

In 2012, BMS received complaints from some doctors' surgeries about the amount of packaging used to deliver the samples. The samples were being distributed in a large corrugated box with void fill such as polystyrene beads to ensure that the products were not damaged in transit. Customer concerns about excess packaging were expressed directly to BMS customer service staff as well as sales representatives. These included the time, effort and cost of managing used boxes and the void space filler.

Approach

BMS presented customer concerns to DHL and asked them to consider how the distribution packaging could be redesigned to:

- Reduce the amount of packaging material
- Eliminate the need for filler
- Improve product security by including an anti-tamper seal
- Ensure product integrity and quality.

A DHL warehouse supervisor came up with the idea of a self-sealing box that holds up to six sample packs, depending on product dimensions. A prototype was made to demonstrate how the smaller box would achieve the desired objectives while reducing the risks of product damage during transit.

Figure 3: Original distribution packaging (left) and the new packaging (right)



Challenges

The proposal was welcomed and encouraged by stakeholders within the company. Their key priority was to ensure product integrity and that the new packaging solution would not increase damage in transit. This was addressed through the design.



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Business benefits

In 2013 the packaging innovation delivered an annual saving of 148 m³ of transported goods (the equivalent of two shipping containers) and a reduction of 2.4 tonnes of cardboard.

The benefits of the new packaging include:

- A reduction in the amount of packaging material consumed (corrugated board, polystyrene loose fill and adhesive tape)
- Reduced waste to landfill (particularly polystyrene) and reduced impacts of recycling
- Improved protection as the samples are tightly packed and unable to move inside the box
- Greater tamper evidence because the address label is used to seal the box
- The smaller packaging can be sent by parcel freight, which is more efficient and costs less than the traditional road freight.

Selling the benefits of a project to stakeholders: keys to success

- **Ensure that product protection is not compromised by a change in packaging.** Some internal stakeholders may be concerned that a reusable or lighter weight packaging system will affect product safety or quality. In both of the BMS examples, product protection was either maintained or enhanced through careful attention to design.
- **If the new packaging requires a change in behaviour from consumers, ensure that the system is convenient and easy to use.** When the reusable cool box was first introduced return rates were very low. DHL Supply Chain established a team to manage returns by contacting customers to organise a convenient time for collection.

