With a vision “to be the most innovative enterprise and preferred supplier in the markets we serve”, 3M prides itself on its history of innovation – reinforced through its brand promise, “practical and ingenious solutions that help customers succeed”. Key values underpinning 3M’s continual success include its commitment to:

- Satisfy our customers with superior quality and value
- Provide investors with an attractive return through sustained, high-quality growth
- Respect our social and physical environments
- Be a company employees are proud to be part of.

3M has 45 core technology platforms ranging from adhesives, biotechnology and films through to nanotechnology, optoelectronics and wound management. The 60,000 products developed through these technology platforms satisfy consumer needs in six market-focused businesses.

New product development and innovation are the cornerstones of 3M’s continued success. According to the Australian Bureau of Statistics, innovation is: “The process of introducing new or significantly improved goods or services and/or implementing new or significantly improved processes”.

3M celebrates its long history of innovation by turning innovators into company legends. In 1925, Dick Drew famously visited a customer’s auto production plant and discovered that the growing demand for two-tone cars meant that workers needed a solution to create cleaner paint lines. After some research, and testing, a new product – masking tape – was born. Product development occurs when investment in research and development leads to new and innovative products. This usually involves phases such as idea generation, testing, engineering, prototype creation, commercialisation, manufacturing and marketing. It can take many years for a product to reach the market and product development also represents significant capital investment; hence 3M uses the term, ‘patient money’. 3M adds 500 innovative new products every year to its 60,000+ product line. Many of these products are ground-breaking, newly-invented products, unique in the marketplace and protected by patents.

3M’s six businesses

- Consumer and Office: Adhesives and wovens such as Scotch® brand, Scotch-Brite®, Post-it® and more.
- Display and Graphics: Films for electronic displays, touch screens, reflective materials for highway safety and marine industrial products and more.
- Industrial and Transportation: Abrasives, specialty adhesives and tapes, as well as automotive, aerospace and marine industrial products and more.
- Health Care: Medical, surgical, pharmaceutical and dental products and more.
- Safety, Security and Protection Services: Respiratory protection systems, anti-counterfeiting security films, cleaning products and more.
- Electro and Communications: Electrical tapes, copper and fibre-optic cabling and more.

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1  Introduction – A Century of Innovation

3M is a global diversified materials science company and a powerful, international operation. Countries. Almost 64 percent of 3M’s entire sales revenue originates from operates subsidiary companies, such as 3M Australia, in more than 60 a truly global presence, 3M services almost 200 national markets, and From its beginnings in 1902 as Minnesota Mining and Manufacturing, 3M visit www.afrbiz.com.au & www.bizcs.co.nz

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3M sets goals to challenge their people to strive for significant improvements. In the early 1980s, the practice was to achieve a photograph of the passport holder to the data page and cover it with a security laminate. While best practice at the time, it was open to the risk of fraudulent photo substitution. DFAT, in partnership with 3M, innovatively applied advances in digital printing technology to issue a passport with a colour facial image and signature digitally printed into the passport, a world first in passports. This evolution occurred over three phases: Dawn I, Dawn II and Dawn III.

DFAT and 3M

In the early 1980s, the practice was to adhere a photograph of the passport holder to the data page and cover it with a security laminate. While best practice at the time, it was open to the risk of fraudulent photo substitution. DFAT, in partnership with 3M, innovatively applied advances in digital printing technology to issue a passport with a colour facial image and signature digitally printed into the passport, a world first for DFAT and 3M.

Dawn III built on the technology developed in the preceding phases of the project and culminated in the first passport with the holder’s facial image and signature digitally printed in full colour being issued on the 4th May 1994. The 3M laminate also contained new covert security features including images of the Australian Coat of Arms, which were visible under coaxial light, and three stylised kangaroos securing the signature label and a corridor of the facial image. These innovations were another world first for DFAT and 3M and significantly reduced the security risk of photo substitution and data alteration.

In 2003, the next generation of 3M laminate allowed DFAT to add the first ‘floating image technology’ seen on passports. Lasers were used during manufacture to create images of kangaroos and emus within the laminate that appear to ‘float’ above and sink below the surface as the page is viewed from different angles.

In 2009, the 3M laminate was redesigned and enhanced to incorporate a continuous Australian wave pattern visible only under UV light. Today, this is one of the key features used by border control authorities to validate the integrity of the passport.

From creation to final product

3M has been involved in the passport design for 40 years, with DFAT and its Australian partners. Together, they have evolved the technology to ensure the security of the passport is continually enhanced.

In 1941, 3M executive William McKnight developed a progressive, employee-focused philosophy supporting risk-taking and innovation that still permeates the company’s workplace culture today.

“Mistakes will be made, but if a person is essentially right, the mistakes…are not as serious in the long run as the mistakes management will make if it is dictatorial…”

“As our business grows, it becomes increasingly necessary to delegate responsibility and to encourage…initiative…”

“Management that is destructively critical when mistakes are made kills initiative. And it is essential that we have many people with initiative if we are to continue to grow.”

3M has emerged as a global leader in providing practical solutions and is home to some of the world’s most recognisable brands. Although a technologically-oriented company, 3M feels that its success stems from the quality of its people. 3M has a diverse global workforce of naturally inquisitive and highly-trained technical specialists that is supported throughout the entire corporation by a progressive and people-centred management philosophy. 3M delights both in reinforcing the principles laid down by some of its key early executives and also celebrating the ongoing success of its current staff. With a continual emphasis on innovation and product development, 3M is committed to finding solutions for its diverse group of customers. Management is also committed to encouraging and supporting staff in their pursuit of excellence. The company attributes much of its success to the 15 percent rule which allows staff to search for proactive solutions for difficult problems.

For a company whose core competency might be described as ‘making things stick’, 3M has developed an innovative entrepreneurial workplace culture that its stakeholders seem more than happy to be stuck with.

Questions & Extension Activities

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- Current Case Studies

3M are on www.afrbiz.com.au
& www.bizcs.co.nz

You will also find links to the 3M website

GLOSSARY

Brand promise The set of benefits associated with an organisation’s products. The brand promise is developed and reinforced through the organisation’s ability and commitment to deliver satisfaction for its customers.

Commercialisation The process of transforming the results of research projects into marketable products or services. Commercialisation is a component of the broader innovation process.

Customer-focused organisation An organisation that emphasises customers as its most important stakeholder and often focuses on both internal and external customers as stakeholders.

Innovation A new and creative idea, product or service. The process of converting knowledge and ideas into better ways of doing business or into new or improved products and services that are valued by the community. The innovation process incorporates research and development, commercialisation and technology diffusion.

Product development The process of developing new products or an aspect of the product management process whereby a product is changed, enhanced or modified to better align with the needs of the market.

Values The beliefs a company stands for, often including what behaviours are expected from employees.

Vision The statement of an organisation’s current and future business goals.

Workplace culture The practical day-to-day demonstration of those formal or informal values and behaviours within an organisation that originate from its corporate culture.


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