



Editorial

Innovation on the agenda

At the recent National Innovation Summit, there was overwhelming support for the development of a national innovation action agenda by the end of the year.

The Summit recognised that innovation is more than R&D or technological change. Also, that innovation incentives, management of intellectual property, raising finance for innovation and the regulatory environment are critical aspects.

At Invetech, with 20 years' experience in new product commercialisation, we recognise these factors and understand that the commercialisation route for many start-up companies and SMEs is an extremely complicated process. Some are unsure of the process of getting an innovation investor ready, and there is not a clear view of what this really means or an understanding of the requirements of venture capitalists. There is a real vacuum between the invented idea and a sensible business proposition and there is the fact that VC funds are uninterested in the packaging of innovation.

Valuable support in this endeavour requires a combination of technology and commercial understanding. As most of our clients are aware, Invetech has long been involved in contract product development. As we respond to the emerging need for successful innovation in Australia, we have recently appointed Roger La Salle to head up and build our already established innovation and technology strategy group. Roger's team offers services in innovation management, commercialisation strategy, technology valuation and due diligence. These services form the business end of our "idea to market" offering. Roger's first article on the innovation process appears in this newsletter.

Paul Wright
Chief Executive Officer

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Speed to market for Pura Milk

by Graham Duell Director Design

Branding and market awareness

National Foods' "Pura" brand is the only nationwide brand for fresh milk products and is the largest selling food item in Australian supermarkets. National Foods has recognised innovation in packaging as essential to continuing to build brand awareness for Pura – critical to its on-going success in an increasingly competitive market.

Speed to market

In late September 1999, National Foods commissioned Invetech to design a new fresh milk bottle for Pura, for pre-Christmas launch. Invetech's task was to develop a design which would capture market share, linking with the "heritage" value that consumers placed on the traditional glass milk bottles, while taking account of marketing and manufacturing factors, as well as the high-speed filling and capping processes existing in some States' manufacturing facilities. Other considerations included the existing logistics for getting the product to market, and the in-store display facilities.

Innovation in design within existing processes

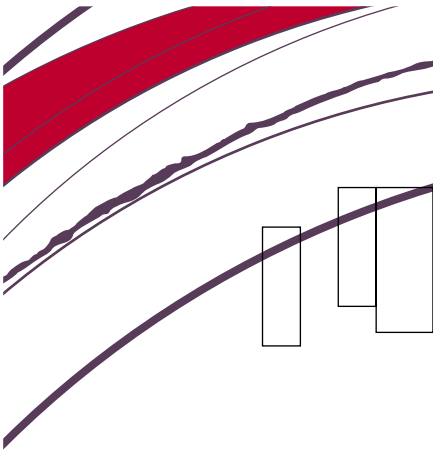
From available materials for the bottle's manufacture, National Foods had selected PET due to its clarity, ability to maximise shelf presentation, handling qualities and its established recyclability.

Our design team's solution developed a strong visual presentation both for the product, because of PET's presentation advantages, and for the brand, via the large label area around the centre of the bottle.

The selected design combined the heritage of traditional glass



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Invetech designs Olympic beds

by Alan Morris Manager Design

A major challenge was to design a bed that would require no tools for assembly and take less than 10 minutes for two people to assemble.

One of the many challenges for an Olympic games host country is housing the thousands of athletes and more particularly, ensuring that the sleeping arrangements suit the many differing requirements in terms of body shapes and sizes.

Invetech has recently completed a project to design and engineer an innovative bunk bed for the Sydney Olympics. These beds are to be sold into the community on completion of the games. Whilst bunk beds may seem like relatively straightforward pieces of furniture, there are a number of stringent requirements that help these new Olympic beds stand out from the pack.

High standards of compliance

Key amongst these requirements was compliance with the Australian bunk bed standard; something most beds on the market currently do not achieve. This standard is specifically aimed at children, the main market for bunk beds, and as the beds will be resold after the Olympics, Invetech's client, Sleepmaker, needed the assurance of standards compliance. The standard is very thorough in areas of entrapment, strength and stability; areas where the new bed more than complies. To this end, sophisticated engineering analysis was undertaken on the design of the plastic bed heads to ensure that it would pass all impact tests prior to the commissioning of large and expensive tooling. The eventual compliance tests carried out by The Australian Furniture Research and Development Institute proved our analysis correct.

Ease of assembly

Another major challenge was to design a bed that required no tools for assembly and took less than 10 minutes for two people to assemble. This is important for two major reasons.

1. In installing 16,000 beds over a short timeframe, it is important to minimise the assembly effort and maximise assembly efficiency so that the installation work force can be in and out of the village in as short a period of time as possible.
2. When athletes arrive at their accommodation, each room will feature two single beds. The athletes, and each country's



Invetech's bedhead design recently won second prize in the PTC Pro Engineer CAD awards

Chef de Mission, will decide how they want to configure their rooms; whether to bunk the beds, extend the single beds by using the specially designed extension pieces, assemble on the ladders and guard rails etc. All of this will be done without the use of tools thereby helping to accelerate the entire process.

Innovative design and features

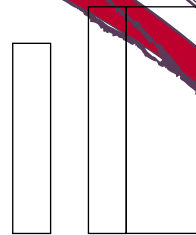
The overall style of the bunk bed is one of modernity and fun, aimed squarely at appealing to younger generations. The design features translucent plastic bed heads over a silver powder-coated frame. The translucent plastic was chosen to enhance light transmission into the bottom bunk ensuring that this area does not feel enclosed for the user, whilst making the bunk (as a piece of furniture), not dominate the room into which it was placed.

The design has also proved a hit with Sleepmaker's retail clients who are showing keen interest in the new bed.





by Roger La Salle,
Director Innovation and Technology Strategy



Commercialisation — understanding the issues for “start-ups” and “spin-offs”

If we examine the typical linear scenario of a product evolution from “idea to market” there is a classic illustration which overviews the process.



The initial stage in the creation of a product or opportunity often occurs quite quickly with an idea or a vision of what might be, a rapid market estimation, and an almost simultaneous conviction that this opportunity is a winner. Such is the birth of many a good and not so good idea. Technical details and product specifications usually follow the initial flash of inspiration and work commences on developing a business plan to lay out the route to success.

Business planning accuracy

Usually the development of a business plan or the commercialisation strategy for the idea is undertaken by its originator. The energy that drives this work is all too often certain conviction that the idea is a winner and the effort in writing the business plan will be rewarded. This is what may be referred to as the QED principle. That is, the business plan is written with a mind-set of attempting to prove the proposition.

In general, if the success rates for new products are examined, it soon becomes clear that most new products fail. But in each case, whether the product was a success or a failure, the investment in each of these new products was justified on the basis of a business plan. Clearly, if most new products fail, it follows that most business plans are probably flawed and have not correctly qualified the investment proposition.

Market evaluation is critical

The evaluation of a new product and the business planning process is far from a trivial exercise. It takes account of many variables, none the least of which is technical and market risk. Because engineering is a fairly precise discipline, experienced engineers can usually anticipate potential problems very early in the development process. Thus, to a great extent, technical risk can be mitigated or quarantined.

However, the reason most business plans, and consequently businesses fail is because initial market estimates are wildly optimistic with real sales seldom meeting expectations. This occurs simply because trying to accurately estimate a market, especially for an entirely new product, is an extremely difficult assignment.

Having a knowledge of the factors that underlie a business or product success and understanding the important drivers of a product are critical in evaluating an opportunity.

Build on success

Fortunately there are some fundamentals that can aid in developing and evaluating opportunities.

Firstly, don't focus on creating new things, but rather try and develop improvements to existing successful products. Making a change or improvement that adds value to a product that is already a success in the market, is very likely to result in a product that will also be a success. Often the new product will replace the old product. Clearly the ability to estimate the possible market for a new product that replaces an existing product is much more reliable than with a product of an entirely new creation. The fountain pen, as an improved quill pen, is one example of an improved product for which a market assessment would have been quite low risk.

In general, the word “Innovation” is best used to describe changes to products that add value.

Targeted innovation process

There are rules and tools that can be employed to greatly enhance innovation to stimulate beneficial outcomes. These tools are valuable assets in the hands of experienced operators and when applied to existing products are highly likely to result in a successful product outcome. The process of “Targeted Innovation” is one of the more recent developments now used by Invetech. Targetted Innovation is used to generate product opportunities, and we see great value in assisting other companies to understand and use this process to great advantage.

Value proposition

Apart from looking for product for which reliable markets can be estimated, there is also a real need to develop and thoroughly understand the “Value Proposition” represented by a new product or business. The value proposition is one of the most valuable concepts used in the new product assessment process. It refers to an understanding of what value the product represents to the market and indeed all parties in the

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commercialisation chain, from the person who conceived the idea, through to the manufacturers and the distributor to the user. The value proposition must be able to be clearly understood and quantified. Above all else, the value proposition must be something that is readily communicated to the market.

Obviously, in the case of industrial and commercial products where a cost benefit can be demonstrated and quantified, this is not such a difficult task. However, in the case of consumer or fashion goods, this is a far more difficult and risky task. Indeed for many companies in this type of market vast fortunes are spent in creating value. Most often this is achieved by developing a brand. Fashion clothing is a classic example where this type of value is developed or in the auto industry where companies such as Mercedes Benz, BMW and Volvo develop and protect their brand or "customer promise" with fierce determination.

Whether it be a consumer or industrial/commercial product, understanding the value proposition is essential in understanding the market and assessing the risks.

Persistence factor

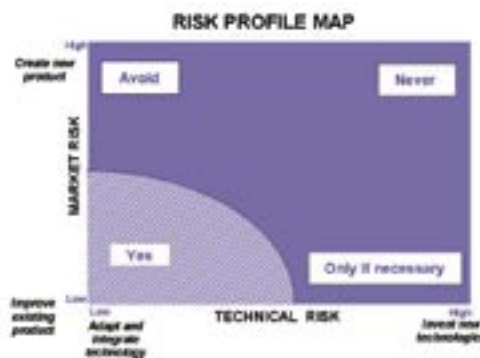
Another important issue to understand in developing a business, is persistence. Any time you hear a successful entrepreneur standing at the lectern telling his or her success story, the underlying theme of persistence always comes through as fundamental. While this is a given, it is not without qualification. For every successful entrepreneur on the lectern there are at least one thousand who have failed. This may be best encapsulated in the words:

"Whilst persistence is an important element of success, it is an essential element of failure."

It is vital to understand that persistence alone will not turn a "dog" into a "dream". The secret is to know when enough is enough, and to move on to the next opportunity.

Manage market risk

In short, be aware that the most likely reason for a business failure will be overly optimistic estimate of the market size. To help to mitigate this risk it is best to improve existing products, thoroughly understand the value proposition and stay with opportunities with a clearly quantifiable benefit. Finally, remember that persisting at all costs is not a sensible business strategy.



Pura milk – from page 1

bottles with the convenience and functionality of easy handling – including a resealable screw cap and a large neck for easy pouring. It also maintained existing packing densities, and was compatible with all retail handling procedures and display facilities.

Focus on marketing goals

Invetech's design team was focussed throughout the project on achieving National Foods' marketing goals. As one of the primary goals was speed to market, the design process was highly interactive with marketing, advertising, tooling, production and filling requirements. Concepts were developed into high-quality images for evaluation, using Invetech's extensive CAD facilities; rapid prototypes were produced for label development and bottle handling trials. FEA analysis was undertaken to ensure compliance with existing capping and filling equipment and close communication was maintained throughout with tooling and production resources.

The net result was an eight-week development period and a product launch in mid-December, 1999, as planned. Recent marketing data from National Foods confirms the bottle's success in the marketplace.